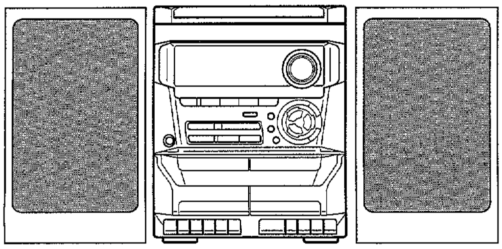
aiwa

aiwa
SERVICE

NSX-S111
NSX-S112
NSX-S116
NSX-S16



COMPACT DISC /
STEREO CASSETTE RECEIVER

- BASIC TAPE MECHANISM : TN–21ZFW–1815
- BASIC CD MECHANISM : 4ZG–1 Z3RNDSHJM,Z4RNDSHC
- TYPE : HR,HE,HC,HS EZ,K,G,V

SERVICE MANUAL

REVISION PUBLISHING

SYSTEM	SPEAKER	CD – CASSEIVER	REMOTE CONTROLLER
NSX–S111 (TYPE : HR,HE,HS)	SX–NS112	CX – NS111	RC UNIT ZAS02
NSX–S116 (TYPE : HC)	SX–NS116	CX – NA116	
NSX–S111 (TYPE : EZ,K,G,V)	SX–NS112	CX – NS111	
NSX–S112 (TYPE : EZ)		CX – NS112	
NSX–S16 (TYPE : EZ)		CX – NS16	RC UNIT ZAS17
NSX–S116 (TYPE : EZ)	SX–NS116	CX – NS116	

- This Service Manual is the "Revision Publishing" and replaces Simple Manual of NSX-S111<HE> (S/M Code No. 09-993-404-3T2), NSX-S111/S112/S116/S16 <HR,EZ,K,G,V,HS> (S/M Code No. 09-991-404-3T3).
- If requiring information about the CD mechanism, see Service Manual of 4ZG-1 (S/M Code No. 09-992-325-4N2).

S/M Code No. 09–996–404–3R2

SPECIFICATIONS

<FM Tuner section>

Tuning range	HR,HE,HC,EZ,K,G,HS : 87.5 MHz to 108 MHz V: FM1 (OIRT) 65 MHz to 74 MHz(10 kHz step) FM2 (CCIR) 87.5 MHz to 108 MHz(50 kHz step)
Usable sensitivity (IHF)	HR,HE,HC : 13.2 dBf EZ,K : 16.8 dBf V: FM1 : 15.3 dBf FM2 : 12.8 dBf
Antenna terminals	75 ohms (unbalanced)

<AM/MW Tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<SW Tuner section> (HR,HE,HC)

Tuning range	5.900 MHz to 17.900 MHz
Usable sensitivity	40 µV(IEC)
Antenna	Wire antenna

<LW Tuner section> (EZ,K,G,HS)

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 uV/m
Antenna	Loop antenna

<Amplifier section>

Power output	HR,HE,HC : Rated : 10 W + 10 W (6 ohms, T.H.D. 1 %, 1 kHz) Reference: 12W + 12W (6 ohms, T.H.D. 10 %, 1 kHz) EZ,K,V,G,HS : Rated : 10 W + 10 W (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) Reference: 12W + 12W (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) DIN MUSIC POWER: 29 W + 29 W
Total harmonic distortion	0.1 % (6 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX : 500 mV HR,HE,HC only : MIC: 1.8 mV (10 kohms)
Outputs	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz - 8000 Hz
Recording system	AC bias
Heads	Deck 1 : Recording/playback X 1, erase head x 1 Deck 2 : Playback head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05% (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX-NS112 / SX-NS116>

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 120 mm cone type Tweeter : 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	86 dB/W/m
Dimensions (W x H x D)	220 x 324 x 235 mm
Weight	2.0 kg

<General>

Power requirements	HR,HE,HC : 120V / 220–230V / 240V AC, switchable, 50/60 Hz K,V,EZ,G,HS : 230V AC, 50Hz
Power consumption	HR,HE,HC,EZ,V,HS : 50W K,G : 55 W
Dimensions of main unit (W x H x D)	260 x 324 x 349.5 mm (10$^1/_4$ x 12$^7/_8$ x 13$^7/_8$ in.)
Weight of main unit	4.9 kg

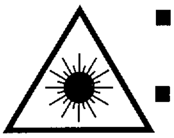
- Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- ■ Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- ■ Advarsel: Usynlig laserstāling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

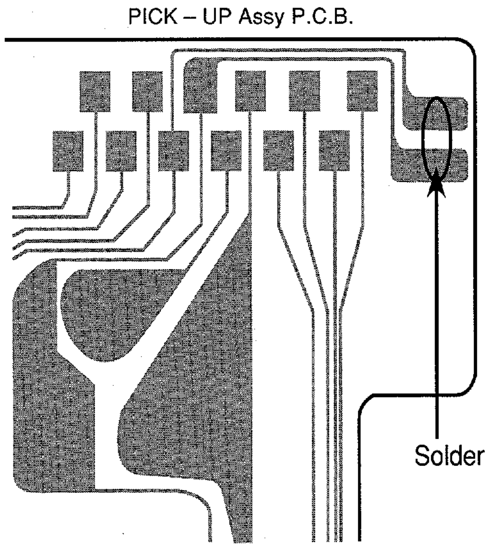
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block

(KSS-213F) <Z3RNDSHJ>
(KSS-213IFAM) <Z4RNDSH>

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure to ground body and workbench, and ensure clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

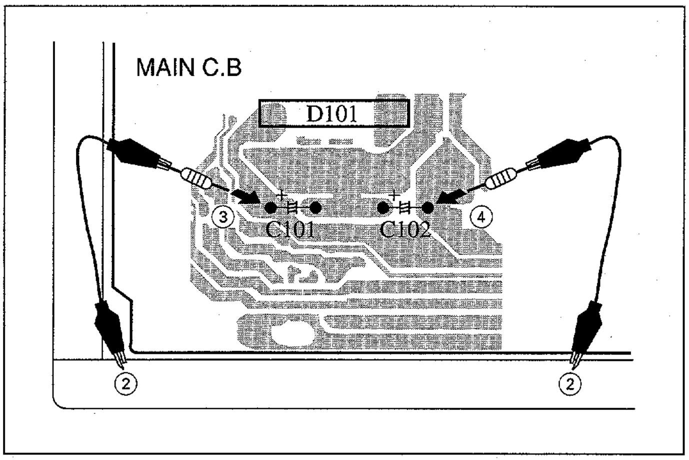


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitor on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

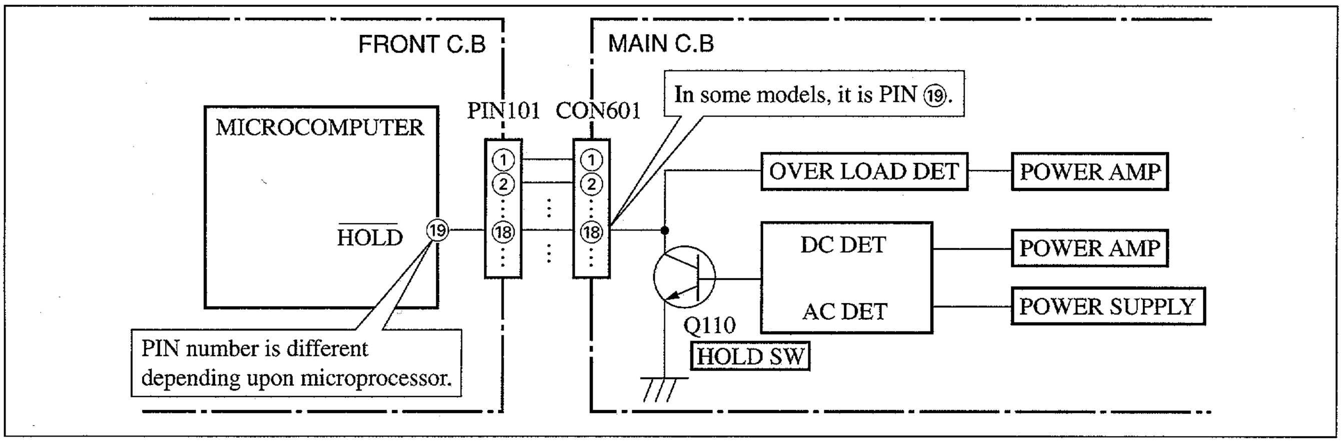
Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is “H”, the MICROCOMPUTER is judged to be operating correctly. When this terminal is “L”, the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go “L” when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to “L”.

- Good or no good judgment of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the “H” level or not.
③ When the HOLD terminal is “L” level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.



In some models, it is PIN ⑲.

PIN number is different depending upon microprocessor.

Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can lead to wrong judgment as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.

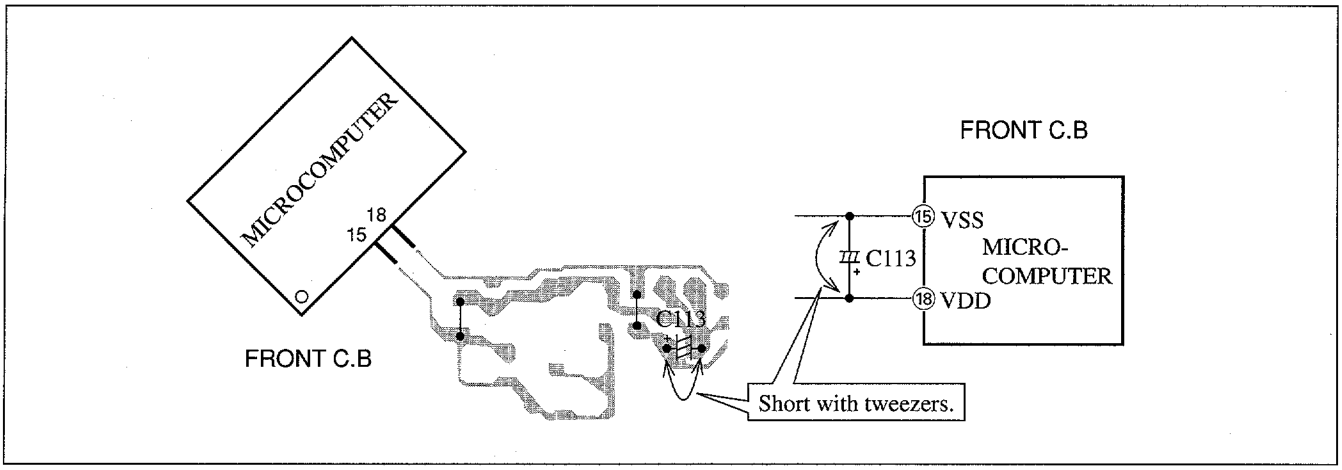


Fig-2-2

② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.

③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8Z-NFA-661-010		C-IC,M38B59MFH-P113FP
	87-A21-218-010		IC,NJL64H380A
	87-017-889-010		IC,NJM4558LD
	87-A20-715-010		IC,M62439SP
	87-070-127-110		IC,LC72131 D
	87-A20-913-010		IC,LA1837NL
	87-A20-502-01		IC,BU1920<112EZ>
TRANSISTOR			
	87-026-214-080		TR,DTA114YS (0.3W)
	87-026-219-080		TR,DTA144ES (0.3W)
	87-026-269-080		TR,DTA114ES
	87-026-610-080		TR,KTC3198GR
	87-026-609-080		TR,KTA1266GR
	87-A30-127-010		TR,2SD2478
	87-A30-126-010		TR,2SB1616
	87-A30-164-080		TR,CSC2001K
	87-A30-234-080		TR,CSC4115BC
	87-A30-091-080		FET,2SJ460
	87-A30-090-080		FET,2SK2541
	87-A30-092-080		FET,2SK439(E/F)<EXCEPT V>
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)<EXCEPT HC>
	87-A40-291-080		DIODE,1N4148 (CPT)<HC ONLY>
	87-A40-393-090		DIODE,1N5402GW(F20)
	87-A40-553-080		DIODE,1N4003 LES
	87-017-932-080		ZENER,MTJ6.2B
	87-A40-336-080		ZENER,MTZJ27D T-72
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-466-080		ZENER,MTZJ2.7A
	87-017-931-080		ZENER,MTZJ5.6B
MAIN C.B			
C101	87-016-495-090		CAP,E 3300-25 SMG
C103	87-016-051-090		CAP,E 2200-35 SMG<EZ,K,V,G,HS>
C104	87-A10-011-090		CAP,E 2200-25 SMG<HE,HR,HC>
C105	87-018-127-080		CAP, CER 470P-50V
C106	87-010-260-080		CAP,E 47-25 SME
C107	87-010-384-080		CAP, ELECT 100-25V
C108	87-010-381-080		CAP, ELECT 330-16V
C111	87-010-247-080		CAP,E 100-50V
C112	87-010-263-080		CAP, ELECT 100-10V
C113	87-010-403-080		CAP, ELECT 3.3-50V
C114	87-010-374-080		CAP, ELECT 47-10V
C115	87-A10-303-080		CAP,M 0.047-50 J
C116	87-A10-303-080		CAP,M 0.047-50 J
C122	87-010-384-080		CAP,E 100-25V
C123	87-010-384-080		CAP,E 100-25V
C124	87-A11-132-080		CAP,TC U 0.01 K B
C127	87-A11-155-080		CAP,TC U 0.01-16ZF<EZ,K,V,G,HS>
C130	87-018-131-080		CAP,TC U 1000P-50 K B<V>
C152	87-010-388-010		CAP,E 1000-25V<HR,HE,HC>
C207	87-010-545-080		CAP, ELECT 0.22-50V
C208	87-010-545-080		CAP, ELECT 0.22-50V
C209	87-A11-154-080		CAP,TC U 4700P-16 Z F
C210	87-A11-154-080		CAP,TC U 4700P-16 Z F
C211	87-010-403-080		CAP, ELECT 3.3-50V
C212	87-010-403-080		CAP, ELECT 3.3-50V
C213	87-010-260-080		CAP, ELECT 47-25V
C214	87-010-260-080		CAP, ELECT 47-25V
C217	87-A10-304-080		CAP,M 0.056-50 J
C218	87-A10-304-080		CAP,M 0.056-50 J
C219	87-010-544-080		CAP, ELECT 0.1-50V
C220	87-010-544-080		CAP, ELECT 0.1-50V
C221	87-018-211-080		CAP,CER 0.01-50<EZ,K,V,G,HS>
C222	87-018-211-080		CAP,CER 0.01-50<EZ,K,V,G,HS>
C229	87-018-123-080		CAP, CER 220P-50V
C235	87-A11-148-080		CAP,TC 0.1-50 ZF
C236	87-A11-148-080		CAP,TC 0.1-50 ZF
C237	87-A11-155-080		CAP,TC 0.01-16 Z F
C253	87-018-131-080		CAP,CER 1000P<EZ,K,V,G,HS>
C254	87-018-131-080		CAP,CER 1000P<EZ,K,V,G,HS>
C255	87-018-115-080		CAP,CER 47P<EZ,K,V,G,HS>
C256	87-018-115-080		CAP,CER 47P<EZ,K,V,G,HS>
C257	87-018-119-080		CAP,CER 100P<EZ,K,V,G,HS>
C258	87-018-119-080		CAP,CER 100P<EZ,K,V,G,HS>
C301	87-018-195-080		CAP, CER 1200P-50V
C302	87-018-195-080		CAP, CER 1200P-50V
C303	87-018-195-080		CAP, CER 1200P-50V
C304	87-018-195-080		CAP, CER 1200P-50V
C307	87-010-263-080		CAP, ELECT 100-10V
C308	87-010-263-080		CAP, ELECT 100-10V
C309	87-018-115-080		CAP,CER 47P-50V<EZ,K,V,G,HS>
C310	87-018-115-080		CAP,CER 47P-50V<EZ,K,V,G,HS>
C311	87-A10-307-080		CAP,M 0.1-50 J
C312	87-A10-307-080		CAP,M 0.1-50 J
C315	87-010-374-080		CAP, ELECT 47-10V
C317	87-010-546-080		CAP, ELECT 0.33-50V
C318	87-010-546-080		CAP, ELECT 0.33-50V
C326	87-018-205-080		CAP, CERA-SOL 0.022
C327	87-A11-148-080		CAP,TC U 0.1-50
C360	87-010-401-080		CAP, ELECT 1-50V
C361	87-010-374-080		CAP, ELECT 47-10V
C399	87-018-127-080		CAP, CER 470P-50V
C401	87-010-545-080		CAP, ELECT 0.22-50V
C402	87-010-545-080		CAP, ELECT 0.22-50V
C403	87-018-118-080		CAP,TC-U 82P-50 B
C404	87-018-118-080		CAP,TC-U 82P-50 B
C411	87-010-405-080		CAP, ELECT 10-50V
C412	87-010-405-080		CAP, ELECT 10-50V
C452	87-010-382-080		CAP,E 22-25V
C458	87-018-131-080		CAP, CER 1000P-50V
C459	87-018-128-080		CAP,TC U 560P-50 K B
C461	87-018-126-080		CAP,TC-U 390P-50 B
C462	87-018-126-080		CAP,TC-U 390P-50 B
C601	87-018-195-080		CAP, CER 1200P-16V
C602	87-018-195-080		CAP, CER 1200P-16V
C611	87-010-545-080		CAP, ELECT 0.22-50V
C612	87-010-545-080		CAP, ELECT 0.22-50V
C613	87-010-545-080		CAP, ELECT 0.22-50V
C614	87-010-545-080		CAP, ELECT 0.22-50V
C615	87-018-104-080		CAP,TC-U 10P-50 SL
C616	87-010-260-080		CAP, ELECT 47-25V
C617	87-010-260-080		CAP, ELECT 47-25V
C701	87-010-404-080		CAP, ELECT 4.7-50V
C702	87-A11-155-080		CAP,TC U 0.01-16 Z F
C703	87-A11-155-080		CAP,TC U 0.01-16 Z F
C704	87-018-131-080		CAP, CER 1000P-50V
C705	87-018-131-080		CAP, CER 1000P-50V
C706	87-018-131-080		CAP, CER 1000P-50V
C707	87-010-112-080		CAP, ELECT 100-16V
C708	87-A11-144-080		CAP,TC U 0.1-50 K B
C709	87-010-248-080		CAP, ELECT 220-10V
C710	87-010-112-080		CAP, ELECT 100-16V
C712	87-018-149-080		CAP,TC-U 15P-50 CH
C713	87-018-149-080		CAP,TC-U 15P-50 CH
C714	87-010-112-080		CAP, ELECT 100-16V
C715	87-018-119-080		CAP, CER 100P-50V
C746	87-A11-155-080		CAP,TC U 0.01-16 Z F
C751	87-A11-155-080		CAP,TC U 0.01-16ZF<EZ,K,V,G,HS>
C752	87-018-143-080		CAP,TC 4.7P-50CH<EZ,K,V,G,HS>
C753	87-010-408-080		CAP, ELECT 47-50V
C755	87-A11-144-080		CAP,TC U 0.1-50 K B

*** NOTE : 1EZ = 111EZ,116EZ,16EZ**

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C756	87-A11-155-080		CAP,TC U 0.01-16 Z F
C757	87-A11-155-080		CAP,TC U 0.01-16 Z F
C758	87-010-112-080		CAP, ELECT 100-16V
C759	87-A11-155-080		CAP,TC U 0.01-16ZF<EZ,K,V,G,HS>
C761	87-010-404-080		CAP, ELECT 4.7-50V
C762	87-010-400-080		CAP, ELECT 0.47-50V
C763	87-010-401-080		CAP, ELECT 1-50V
C764	87-010-401-080		CAP, ELECT 1-50V
C765	87-018-115-080		CAP, CER 47P-50V
C766	87-010-407-080		CAP, ELECT 33-50V
C768	87-A11-147-080		CAP,TC U 0.047-50 Z F
C769	87-010-403-080		CAP, ELECT 3.3-50V
C770	87-A11-155-080		CAP,TC U 0.01-16 Z F
C771	87-010-406-080		CAP, ELECT 22-50
C773	87-018-130-080		CAP, TC 820P-50<HR,HE,HC>
C773	87-018-131-080		CAP, TC 1000P-50<V>
C773	87-018-195-080		CAP, TC 1200P-16<112EZ>
C773	87-018-196-080		CAP, TC 1500P-16<1EZ,K,G,HS>
C774	87-010-405-080		CAP, ELECT 10-50V
C776	87-A11-155-080		CAP,TC U 0.01-16 Z F
C783	87-018-199-080		CAP, CER 3300P<HR,HE,HC,V>
C783	87-018-202-080		CAP.CERAM.6800PF<EZ,K,G,HS>
C784	87-018-199-080		CAP, CER 3300P<HR,HE,HC,V>
C784	87-018-202-080		CAP.CERAM.6800PF<EZ,K,G,HS>
C785	87-010-405-080		CAP, ELECT 10-50V
C786	87-010-405-080		CAP, ELECT 10-50V
C787	87-018-196-080		CAP, TC 1500P-16
C788	87-018-196-080		CAP, TC 1500P-16
C789	87-010-403-080		CAP, ELECT 3.3-50V<HR,HE,HC,V>
C789	87-010-546-080		CAP, ELECT 0.33-50M<EZ,K,G,HS>
C790	87-010-403-080		CAP, ELECT 3.3-50V<HR,HE,HC,V>
C790	87-010-546-080		CAP, ELECT 0.33-50M<EZ,K,G,HS>
C801	87-A11-155-080		CAP,TC 0.01-16ZF<EZ,K,G,HS>
C802	87-A11-155-080		CAP,TC 0.01-16ZF<EZ,K,G,HS>
C803	87-A11-155-080		CAP,TC 0.01-16ZF<EZ,K,G,HS>
C804	87-A11-155-080		CAP,TC 0.01-16ZF<EZ,K,G,HS>
C805	87-A11-144-080		CAP,TC 0.1-50KB
C807	87-A11-144-080		CAP,TC U 0.1-50KB
C808	87-A11-155-080		CAP,TC U 0.01-16 Z F
C809	87-A11-155-080		CAP,TC 0.01-16ZF<EZ,K,V,G,HS>
C810	87-A11-155-080		CAP,TC 0.01-16ZF<EZ,K,V,G,HS>
C811	87-A11-155-080		CAP,TC 0.01-16ZF<EZ,K,V,G,HS>
C812	87-010-408-080		CAP,E 47-50V<EZ,K,V,G,HS>
C813	87-018-131-080		CAP, CER 1000P-50V
C851	87-018-123-080		CAP, CER 220P-50V<112EZ>
C852	87-018-123-080		CAP, CER 220P-50V<112EZ>
C853	87-018-127-080		CAP, CER 470P-50V<112EZ>
C854	87-A11-144-080		CAP,TC U 0.1-50 K B<112EZ>
C855	87-010-405-080		CAP, ELECT 10-50V<112EZ>
C856	87-010-405-080		CAP, ELECT 10-50V<112EZ>
C857	87-018-134-080		CAP,TC U 0.01-16 N Y<112EZ>
C858	87-018-109-080		CAP, CER 22P-50V<112EZ>
C859	87-018-109-080		CAP, CER 22P-50V<112EZ>
C860	87-018-134-080		CAP,TC U 0.01-16 N Y<112EZ>
C901	87-A11-148-080		CAP,TC U 0.1-50 ZF<EZ,K,V,G,HS>
C901	87-A11-149-080		CAP,TC U 0.22-50 ZF<HR,HE,HC>
C921	87-A11-155-080		CAP,TC 0.01-16ZF<EZ,K,G,HS>
C922	87-018-099-080		CAP CERA 3.9P-50<EZ,K,G,HS>
C923	87-018-101-080		CAP,TC-U 5.6P-50<EZ,K,G,HS>
C924	87-014-049-080		CAP,PP 470P-100 J<EZ,K,G,HS>
C931	87-010-263-080		CAP, ELECT 100-10V<HR,HE,HC>
C932	87-010-400-080		CAP, ELECT 0.47-50V<HR,HE,HC>
C934	87-A11-155-080		CAP,TC U 0.01-16 Z F<HR,HE,HC>
C935	87-A11-155-080		CAP,TC U 0.01-16 Z F<HR,HE,HC>
C936	87-A11-155-080		CAP,TC U 0.01-16 Z F<HR,HE,HC>
C937	87-A11-155-080		CAP,TC U 0.01-16 Z F<except V>
C938	87-A11-155-080		CAP,TC U 0.01-16 Z F<except V>
C939	87-014-073-080		CAP,PP 4700P-100 J<HR,HE,HC>
C940	87-014-051-080		CAPACITOR (PP), 560P<HR,HE,HC>
C941	87-018-109-080		CAP, CER 22P-50V<HR,HE,HC>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C943	87-A11-144-080		CAP,TC U 0.1-50 K B
C944	87-018-104-080		CAP,TC-U 10P-50 SL<V>
CF801	87-008-261-010		FLTR,SFE10.7MA5<HR,HE,HC,V>
CF801	87-008-423-010		FLTR,SFE10.7MS3G-A<EZ,K,G,HS>
CF802	82-785-747-010		CF MS2 GHY R<EZ,K,G,HS>
CF802	87-008-261-010		FLTR,SFE10.7MA5-A<V>
CN301	87-A60-620-010		CONN,3P V 2MM JMT
CN351	87-A60-625-010		CONN,8P V 2MM JMT
CN601	88-NF9-657-010		CONN,30P H BLK TYK-B(X)
CN602	87-099-194-010		CONN,6P 6216V
D981	87-A40-618-080		VARI-CAP,SVC 348(S/T)<HR,HE,HC>
FB601	87-008-372-080		FLTR,EMI BLOIRNI<EZ,K,V,G,HS>
FB603	87-008-474-080		F-BEAD,EMI BL02RN1<EZ,K,V,G,HS>
FB813	87-008-372-080		FLTR,EMI BLOIRNI<EZ,K,V,G,HS>
FCC1	88-906-251-110		FF-CABLE,6P 1.25
FFE801	A8-8ZA-192-070		8ZA-1 FEUNC<HC>
FFE801	A8-8ZA-190-030		8ZA-1 FEUNM<HR,HE>
FFE801	A8-6ZA-193-030		6ZA-1 FEVNM<V>
FFE801	A8-6ZA-191-130		6ZA-1 FEENM<EZ,K,G,HS>
J201	87-A60-602-010		JACK,DIA6.3 BLK ST W/SW TC
J202	87-A60-238-010		TERMINAL,SP 4P (MSC)
J601	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
J801	87-A60-202-010		TML,ANT4P MSP<HR,HE,HC,V>
J802	87-A60-403-010		TML,ANTPAL 2P<EZ,K,G,HS>
J931	81-754-629-010		CONNECTOR, 2P<HR,HE,HC>
L201	87-003-383-010		COIL,1UH-S
L202	87-003-383-010		COIL,1UH-S
L451	87-007-342-010		COIL,OSC 85K BIAS
L701	87-005-847-080		COIL,2.2UH(CECS)
L706	87-005-849-080		COIL,10UH(CECS) <HR>
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A90-052-010		FLTR,CFMT-450A(TOK)<HR,HE,HC>
L772	87-A91-110-010		FLTR,PCFJZH-450(T)<EZ,K,V,G,HS>
L766	87-005-849-080		COIL,10UH(CECS)
L801	87-005-847-080		COIL,2.2UH(CECS)
L802	87-005-849-080		COIL,10UH K CECS <V>
L851	87-005-847-080		COIL,2.2UH(CECS)<112EZ>
L933	87-A50-159-010		COIL,10MH K C2B<HR,HE,HC>
L934	87-005-372-080		COIL S 1MHM<HR,HE,HC>
L941	87-A50-020-010		COIL,ANT LW(COI)<EZ,K,G,HS>
L941	87-A50-022-010		COIL,ANT SW(COI)<HR,HE,HC>
L942	87-A50-019-010		COIL,OSC LW(COI)<EZ,K,G,HS>
L942	87-A50-173-010		COIL,OSC SW-N(COI)<HR,HE,HC>
L957	87-005-849-080		COIL,10UH K CECS<HR,HE,HC>
L981	8Z-NFA-665-010		COIL,AMPACK 2L<EZ,K,G,HS>
L981	8Z-NFA-664-010		COIL,AMPACK 4L<V>
L982	87-A50-431-010		COIL,OSC MW(3BSW)<HR,HE,HC>
L983	87-A50-430-010		COIL,ANT MW(3BSW)<HR,HE,HC>
R249	87-A00-258-080		RES,M/F 0.22-1WJ
R250	87-A00-258-080		RES,M/F 0.22-1WJ
RY101	87-045-389-010		RELAY,12V OSA-SS-212DMS
TC941	87-011-220-080		TRIMMER CAP 20P VTC<HR,HE,HC>
TC942	87-011-221-080		CAP,TRMR 30P<except V>
W101	83-NE2-618-110		F-CABEL,5P-2.5
WH102	87-A90-459-010		HLDR,WIRE 2.5-5P
X701	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
X751	87-030-354-010		VIB,CF BFU 450C<HR,HE,HC>
X851	87-A70-091-010		VIB,XTAL 4.332MHZ<112EZ>

FRONT C.B

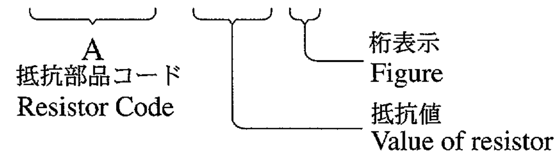
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C101	87-A11-147-080		CAP,TC U 0.047-50 Z F
C102	87-A11-147-080		CAP,TC U 0.047-50 Z F
C103	87-015-699-040		CAP,E 10-50 7L
C104	87-010-246-040		CAP,E 47-35 SME
C105	87-018-205-080		CAP, CERA-SOL 0.022
C110	87-018-205-080		CAP, CERA-SOL 0.022
C111	87-A11-155-080		CAP,TC U 0.01-16 Z F
C112	87-018-131-080		CAP, CER 1000P-50V
C113	87-018-205-080		CAP, CERA-SOL 0.022
C114	87-018-205-080		CAP, CERA-SOL 0.022

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C115	87-018-205-080		CAP, CERA-SOL 0.022
C116	87-018-128-080		CAP, CERA-SOL SS 560P
C118	87-018-147-080		CAP,TC-U 10P-50 CH
C119	87-010-401-040		CAP,E 1-50 SME
C120	87-018-205-080		CAP, CERA-SOL 0.022
C121	87-010-248-040		CAP,E 220-10 SME
C122	87-010-378-040		CAP,E 10-16
C123	87-A11-147-080		CAP,TC U 0.047-50 Z F
C124	87-A11-152-080		CAP,TC U 1000P-50 Z F
C201	87-018-118-080		CAP,TC-U 82P-50 B
C202	87-018-117-080		CAP,TC-U 68P-50 SL
C205	87-018-117-080		CAP,TC-U 68P-50 SL
C208	87-018-117-080		CAP,TC-U 68P-50 SL
C209	87-018-117-080		CAP,TC-U 68P-50 SL
C210	87-018-117-080		CAP,TC-U 68P-50 SL
C211	87-A11-147-080		CAP,TC U 0.047-50 Z F
C213	87-010-421-040		CAP,E 4.7-50 5L
C214	87-010-404-040		CAP,E 4.7-50 SME
C401	87-A11-154-080		CAP,TC U 4700P-16 ZF<HR,HR,HC>
C402	87-010-060-040		CAP,E 100-16<HR,HR,HC>
C403	87-015-692-040		CAP,E 0.22-50M<HR,HR,HC>
C404	87-018-119-080		CAP,TC-U 100P-50 SL<HR,HR,HC>
C405	87-015-692-040		CAP,E 0.22-50M<HR,HR,HC>
C406	87-A11-148-080		CAP,TC U 0.1-50 ZF<HR,HR,HC>
C408	87-018-119-080		CAP,TC-U 100P-50 B<HR,HR,HC>
C409	87-010-378-040		CAP,E 10-16 SME<HR,HR,HC>
C410	87-A11-147-080		CAP,TC U 0.047-50<HR,HR,HC>
C413	87-A11-110-080		CAP, TC 820P-50V<HR,HR,HC>
C301	87-A11-148-080		CAP,TC U 0.1-50 Z F<HR,HE,HC>
C701	87-010-384-040		CAP,E 100-25 SME
C702	87-A11-155-080		CAP,TC U 0.01-16 Z F
CN101	88-NF9-658-010		CONN,30P BLK TYK-B(P)
CN701	87-A60-674-010		CONN,10P H 2MM JMT
CN801	87-099-015-010		CONN,13P 6216V
EMI401	87-008-372-080		FILTER, EMI BL OIRNI<HR,HR,HC>
FCC2	88-913-221-110		FF-CABLE, 13P 1.25 220MM
FL201	8Z-NFA-630-010		FL,10-BT-207GAK
J401	87-A60-651-010		JACK,3.5MONO<HR,HR,HC>
L101	87-A50-050-010		COIL,CLK 4.19M(COI)
S101	87-A90-535-010		SW,RTRY EC16B24304
S301	87-A90-164-080		SW,TACT SKQAB(N)
S302	87-A90-164-080		SW,TACT SKQAB(N)

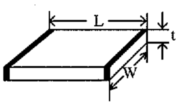
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
S303	87-A90-164-080		SW,TACT SKQAB(N)
S304	87-A90-164-080		SW,TACT SKQAB(N)
S305	87-A90-164-080		SW,TACT SKQAB(N)
S306	87-A90-164-080		SW,TACT SKQAB(N)
S307	87-A90-164-080		SW,TACT SKQAB(N)
S308	87-A90-164-080		SW,TACT SKQAB(N)
S309	87-A90-164-080		SW,TACT SKQAB(N)
S310	87-A90-164-080		SW,TACT SKQAB(N)<112EZ>
S311	87-A90-164-080		SW,TACT SKQAB(N)<112EZ>
S312	87-A90-164-080		SW,TACT SKQAB(N)<112EZ>
S321	87-A90-164-080		SW,TACT SKQAB(N)
S322	87-A90-164-080		SW,TACT SKQAB(N)
S323	87-A90-164-080		SW,TACT SKQAB(N)
S324	87-A90-164-080		SW,TACT SKQAB(N)
S325	87-A90-164-080		SW,TACT SKQAB(N)
S326	87-A90-164-080		SW,TACT SKQAB(N)
S327	87-A90-164-080		SW,TACT SKQAB(N)
S328	87-A90-164-080		SW,TACT SKQAB(N)
S329	87-A90-164-080		SW,TACT SKQAB(N)
S330	87-A90-164-080		SW,TACT SKQAB(N)
SFR701	87-024-350-080		SFR 2.2K DIA 6H
VR401	87-NB7-602-010		VR,RTRY 10KAX1 1 V
AC1 C.B			
⚠ F101	87-035-359-010		FUSE,500MA 250V T<EZ,K,V,G,HS>
⚠ F101	87-A91-208-010		FUSE,400MA 250V T 50T<HR,HE,HC>
⚠ FC1	87-033-213-080		CLAMP, FUSE<EZ,K,G,V,HS>
⚠ FC2	87-033-213-080		CLAMP, FUSE<EZ,K,G,V,HS>
⚠ FC101	87-033-147-010		FUSE CLAMP<HR,HE,HC>
⚠ FC102	87-033-147-010		FUSE CLAMP<HR,HE,HC>
⚠ PT101	8Z-NFA-623-110		PT,HR EI57-35 ZNF-A<HR,HE,HC>
⚠ PT101	8Z-NFA-625-110		PT,E EI57-35 ZNF-A<EZ,K,V,G,HS>
⚠ SW101	87-A90-165-010		SW,SL 1-2-3 SWS2301<HR,HE,HC>
⚠ T1	87-A60-317-010		TERMINAL, 1P MSC<EZ,K,V,G,HS>
⚠ T2	87-A60-317-010		TERMINAL, 1P MSC<EZ,K,V,G,HS>
⚠ T101	87-A60-317-010		TERMINAL, 1P MSC<HR,HE,HC>
⚠ T102	87-A60-317-010		TERMINAL, 1P MSC<HR,HE,HC>
AC2 C.B			
WH101	87-A90-459-010		HLDR,WIRE 2.5-5P

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

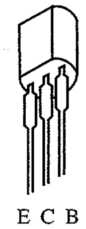
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



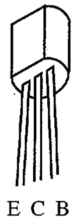
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

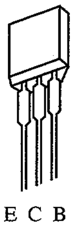
TRANSISTOR ILLUSTRATION



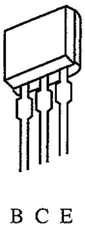
KTA1266GR
KTC3198GR



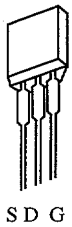
CSC2001K



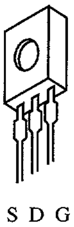
DTA114YS
DTA114ES
DTA144ES



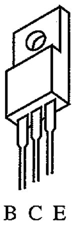
CSC4115BC



2SK2541
2SK439E/F



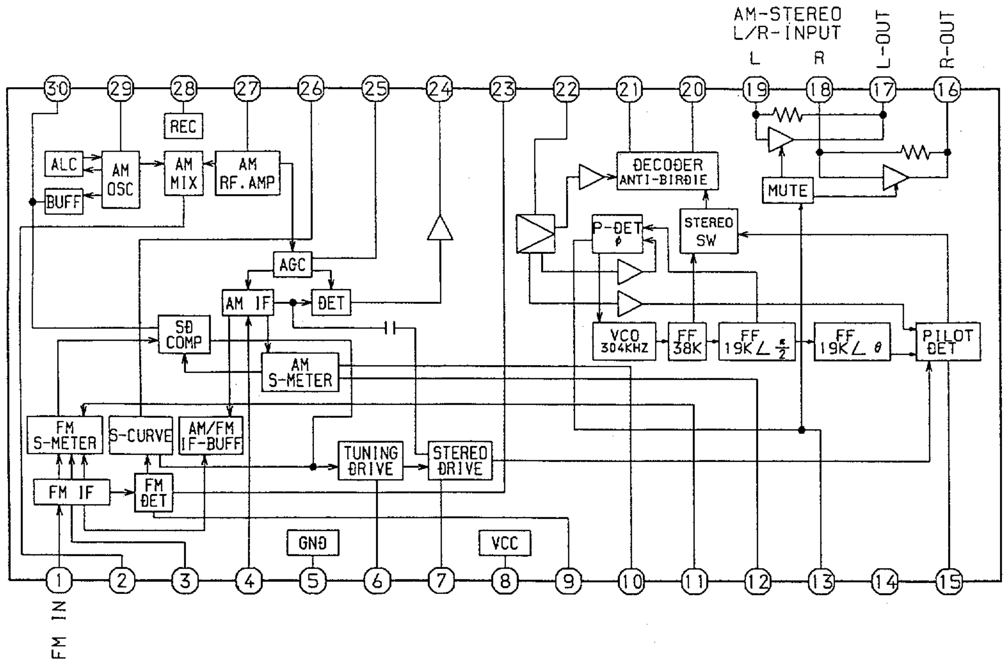
2SJ460



2SB1616
2SD2478

IC BLOCK DIAGRAM

IC, LA1837NL


AM-STEREO
L/R-INPUT
L
R
L-OUT
R-OUT
REC
ALC
AM OSC
AM MIX
AM RF.AMP
BUFF
AGC
AM IF
DET
SD COMP
AM S-METER
FM S-METER
S-CURVE
AM/FM IF-BUFF
FM IF
FM DET
TUNING DRIVE
STEREO DRIVE
GND
VCC
DECODER ANTI-BIRDIE
P-DET φ
STEREO SW
MUTE
VCO 304KHZ
FF 38K
FF 19K∠π/2
FF 19K∠θ
PILOT DET
FM IN
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
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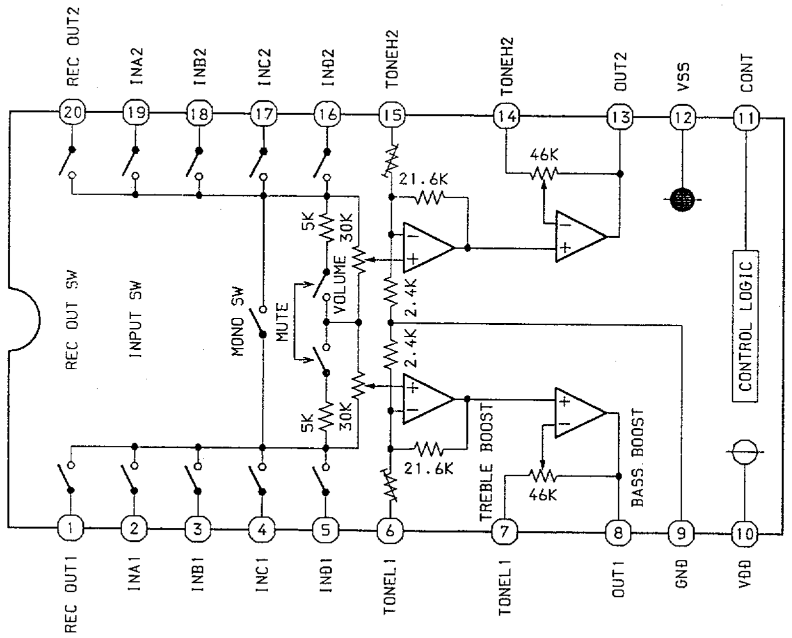
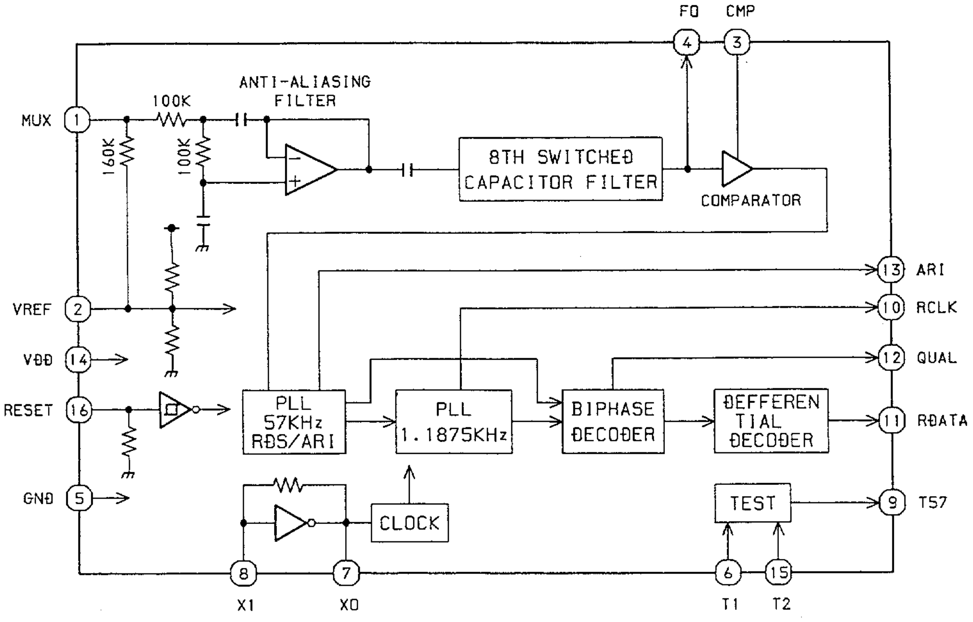
29
30

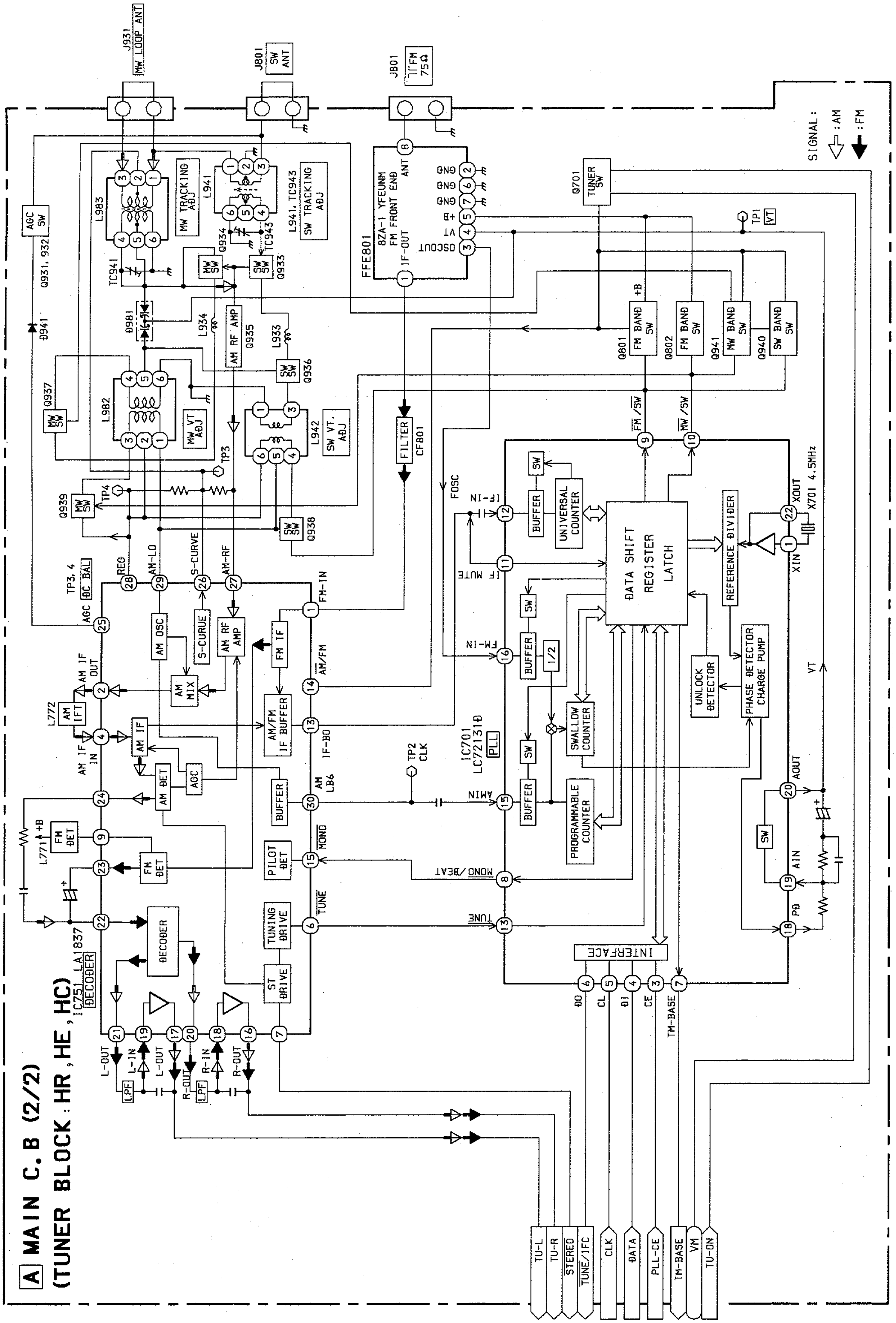
IC, M62439SP


REC OUT2
INA2
INB2
INC2
IND2
TONEH2
TONEH2
OUT2
VSS
CONT
20
19
18
17
16
15
14
13
12
11
21.6K
46K
5K
30K
VOLUME
2.4K
2.4K
5K
30K
21.6K
46K
REC OUT SW
INPUT SW
MONO SW
MUTE
TREBLE BOOST
BASS BOOST
CONTROL LOGIC
1
2
3
4
5
6
7
8
9
10
REC OUT1
INA1
INB1
INC1
IND1
TONEL1
TONEL1
OUT1
GND
VDD

IC, BU1920FS <112 EZ>

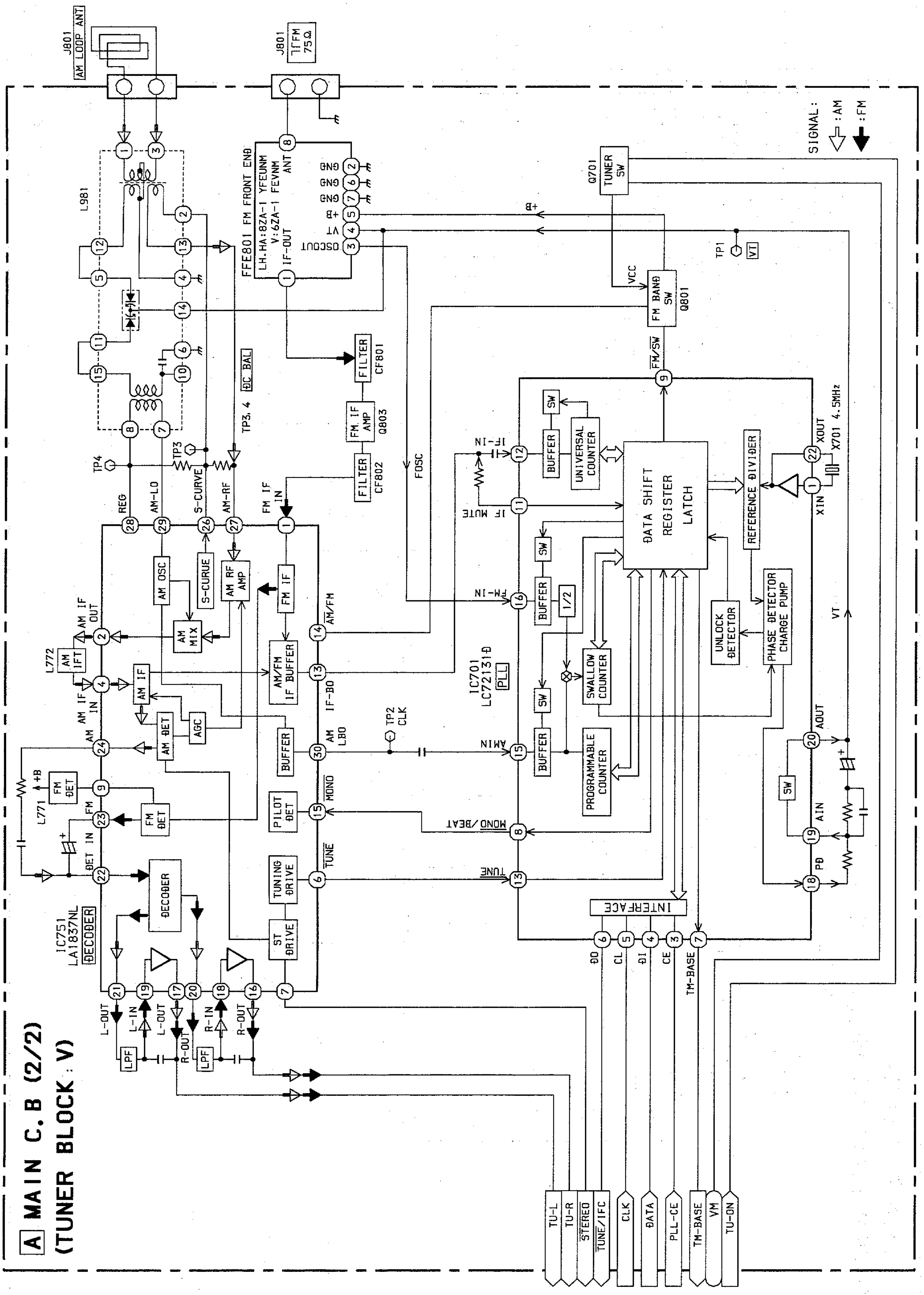

FO
CMP
4
3
MUX
1
100K
ANTI-ALIASING FILTER
160K
100K
8TH SWITCHED CAPACITOR FILTER
COMPARATOR
13
ARI
VREF
2
10
RCLK
VDD
14
12
QUAL
RESET
16
PLL 57KHz RDS/ARI
PLL 1.1875KHz
BIPHASE DECODER
DEFFERENTIAL DECODER
11
RDATA
GND
5
CLOCK
TEST
9
T57
8
7
6
15
X1
XO
T1
T2

BLOCK DIAGRAM – 1 (TUNER : HR, HE, HC)

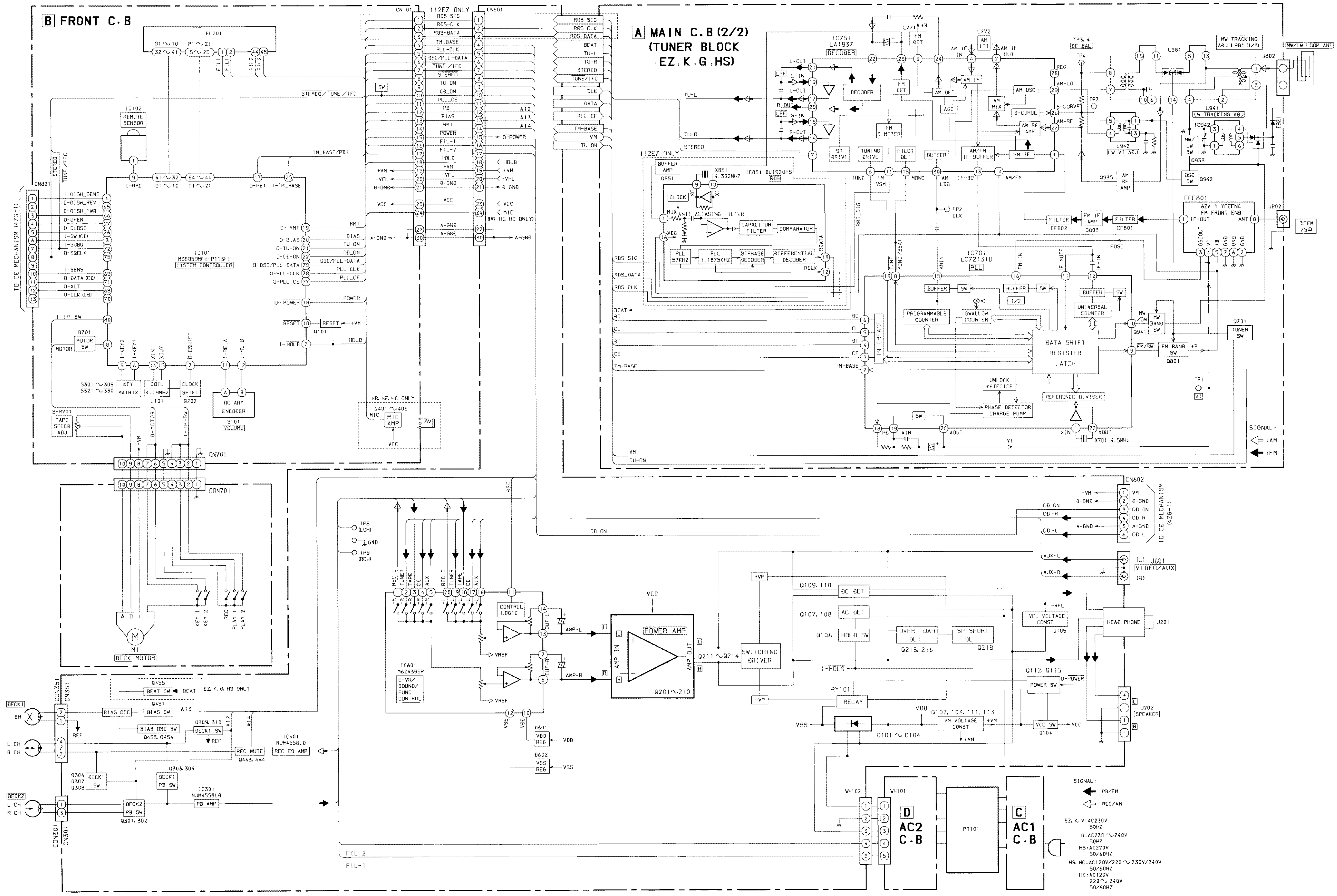


A MAIN C.B (2/2)
(TUNER BLOCK : HR, HE, HC)
J931 MW LOOP ANT
J801 SW ANT
J801 FM 75Ω
SIGNAL: ⇩ : AM ⬇ : FM
AGC SW Q931, 932
D941
L983
MW TRACKING ADJ
L941
L941, TC943 SW TRACKING ADJ
TC941
Q934 MW SW
TC943
Q933 SW SW
D981
L934
AM RF AMP Q935
L933
Q936 SW SW
L982
Q937 MW SW
MW VT ADJ
L942
SW VT. ADJ
TP3
TP4
Q939 MW SW
Q938 SW SW
FFE801 8ZA-1 YFEUNM FM FRONT END
ANT
GND
+B
VT
OSCOUT
IF-OUT
FILTER CF801
FOSC
Q701 TUNER SW
TP1 VT
Q801 FM BAND SW
Q802 FM BAND SW
Q941 MW BAND SW
Q940 SW BAND SW
FM/SW
MW/SW
TP3, 4 DC BAL
AGC
REG
AM-LO
S-CURVE
AM-RF
FM-IN
AM OSC
S-CURVE
AM RF AMP
FM IF
AM MIX
AM/FM
AM/FM IF BUFFER
AM IF OUT
L772 AM IFT
AM IF IN
AM IF
AM DET
AGC
IF-DO
BUFFER
AM LB6
L771 +B FM DET
FM DET
PILOT DET
MONO
TUNING DRIVE
TUNE
ST DRIVE
DECODER
IC751 LA1837 DECODER
L-OUT
L-IN
R-IN
R-OUT
LPF
TP2 CLK
IC701 LC72131D PLL
IF-IN
BUFFER
SW
UNIVERSAL COUNTER
IF MUTE
FM-IN
1/2
SWALLOW COUNTER
AMIN
PROGRAMMABLE COUNTER
MONO/BEAT
DATA SHIFT REGISTER LATCH
REFERENCE DIVIDER
UNLOCK DETECTOR
PHASE DETECTOR CHARGE PUMP
XOUT
X701 4.5MHz
XIN
AOUT
AIN
PD
INTERFACE
DO
CL
DI
CE
TM-BASE
TU-L
TU-R
STEREO
TUNE/IFC
CLK
DATA
PLL-CE
TM-BASE
VM
TU-ON

BLOCK DIAGRAM – 2 (TUNER : V)

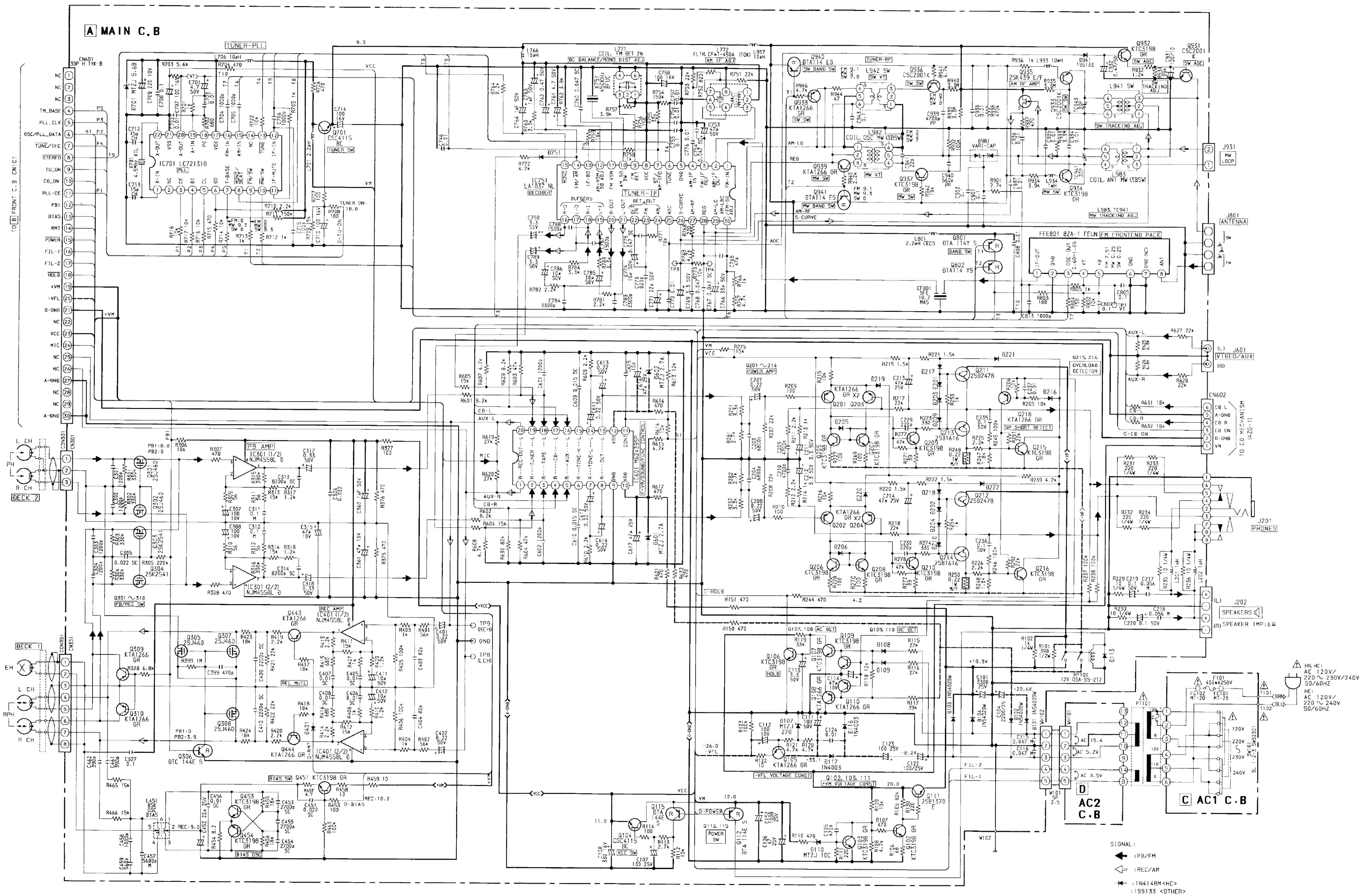

A MAIN C.B (2/2)
(TUNER BLOCK : V)
J801 AM LOOP ANT
J801 FM 75Ω
L981
FFE801 FM FRONT END
LH.HA:8ZA-1 YFEUNM
V:6ZA-1 FEVNM
ANT
GND
GND
GND
B+
VT
OSCOUT
IF-OUT
B+
Q701 TUNER SW
SIGNAL: :AM :FM
TP1 VT
VCC
FM BAND SW Q801
FM/SW
FILTER CF801
FM IF AMP Q803
FILTER CF802
FOSC
DC BAL
TP3, 4
TP4
TP3
REG
AM-LO
S-CURVE
AM-RF
FM IF IN
AM OSC
S-CURVE
AM RF AMP
FM IF
AM MIX
AM IF OUT
AM/FM
L772 AM IFT
AM IF IN
AM IF
AM/FM IF BUFFER
IF-BO
AGC
AM DET
AM
BUFFER
AM LBO
TP2 CLK
L771 FM DET +B
FM
FM DET
PILOT DET
MONO
DET IN
DECODER
TUNING DRIVE
TUNE
IC751 LA1837NL DECODER
ST DRIVE
L-OUT
L-IN
L-OUT
R-OUT
R-IN
R-OUT
LPF
LPF
IF-IN
IF MUTE
BUFFER
UNIVERSAL COUNTER
SW
DATA SHIFT REGISTER LATCH
REFERENCE DIVIDER
XOUT
X701 4.5MHz
XIN
FM-IN
BUFFER
1/2
SW
UNLOCK DETECTOR
PHASE DETECTOR CHARGE PUMP
VT
IC701 LC72131D PLL
SWALLOW COUNTER
SW
AMIN
BUFFER
PROGRAMMABLE COUNTER
AOUT
SW
AIN
MONO/BEAT
PD
TUNE
INTERFACE
DO
CL
DI
CE
TM-BASE
TU-L
TU-R
STEREO
TUNE/IFC
CLK
DATA
PLL-CE
TM-BASE
VM
TU-ON

BLOCK DIAGRAM – 3 (MAIN / FRONT / TUNER : EZ, K, G, HS)

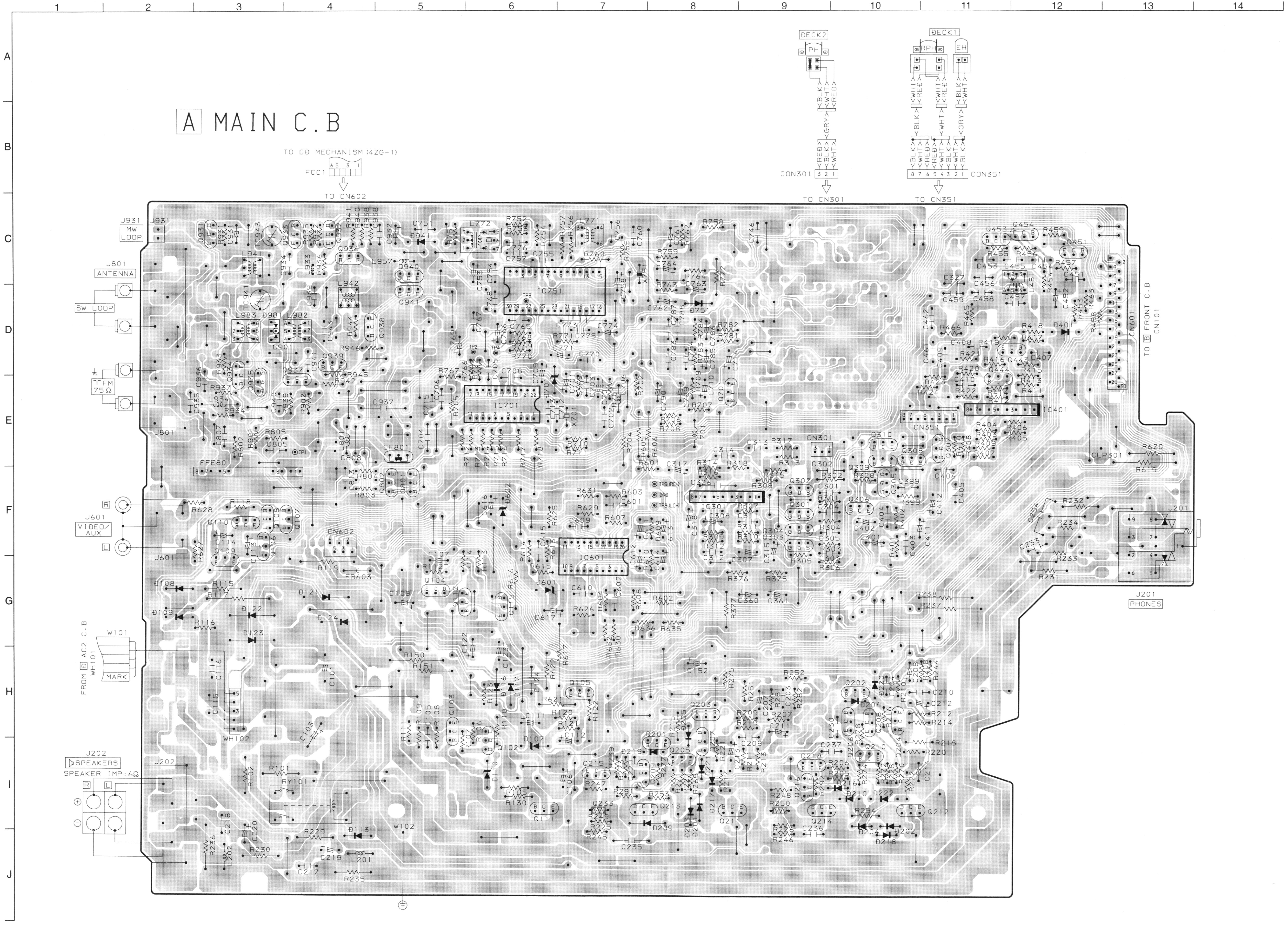


B FRONT C.B
FL701
IC102 REMOTE SENSOR
CN801
TO CD MECHANISM (4ZG-1)
I-DISH_SENS
O-DISH_REV
O-DISH_FWD
O-OPEN
O-CLOSE
I-SW (CD)
I-SUBQ
O-SQCLK
I-SENS
O-DATA (CD)
O-XLT
O-CLK (CD)
IC101 M38B59MFH-P113FP SYSTEM CONTROLLER
Q701 MOTOR SW
S301 ~ 309 S321 ~ 330 KEY MATRIX
COIL 4.19MHZ L101
CLOCK SHIFT Q202
ROTARY ENCODER S101 VOLUME
SFR701 TAPE SPEED ADJ
CN701
CON701
M1 DECK MOTOR
CN101
112EZ ONLY
CN601
RDS-SIG
RDS-CLK
RDS-DATA
TM_BASE
PLL-CLK
OSC/PLL-DATA
TUNE/IFC
STEREO
TU_ON
CD_ON
PLL_CE
PB1
BIAS
RMT
POWER
FIL-1
FIL-2
HOLD
+VM
-VFL
D-GND
VCC
A-GND
MIC (HR, HE, HC ONLY)
HR, HE, HC ONLY Q401 ~ 406 MIC AMP
A MAIN C.B (2/2) (TUNER BLOCK : EZ, K, G, HS)
IC751 LA1837 DECODER
FM DET
AM IFT
L771
L772
AM IF AMP
AM DET
AGC
AM MIX
AM OSC
S-CURVE
AM RF AMP
FM IF
AM/FM IF BUFFER
ST DRIVE
TUNING DRIVE
PILOT DET
BUFFER
FM S-METER
112EZ ONLY
BUFFER AMP Q851
X851 4.332MHZ
IC851 BU1920FS RDS
CLOCK
ANTI ALIASING FILTER
CAPACITOR FILTER
COMPARATOR
PLL 57KHZ
PLL 1.1875KHZ
BIPHASE DECODER
DIFFERENTIAL DECODER
IC701 LC72131D PLL
PROGRAMMABLE COUNTER
SWALLOW COUNTER
UNIVERSAL COUNTER
DATA SHIFT REGISTER LATCH
UNLOCK DETECTOR
PHASE DETECTOR CHARGE PUMP
REFERENCE DIVIDER
X701 4.5MHz
MW TRACKING ADJ L981 (1/5)
MW/LW LOOP ANT
L981
L941 LW TRACKING ADJ
L942 LW VT ADJ
IC942
MW/LW SW Q933
OSC SW Q942
Q935 AM RF AMP
FFE801 6ZA-1 YFEENC FM FRONT END
J802
J802 FM 75Ω
FILTER CF802
FM IF AMP Q803
FILTER CF801
MW/SW MW BAND SW Q941
FM/SW FM BAND SW Q801
Q701 TUNER SW
TP1 VT
TP2 CLK
TP3
TP4 DC BAL
SIGNAL: AM FM
CN602
TO CD MECHANISM (4ZG-1)
CD ON
CD R
CD L
J601 (L) VIDEO/AUX (R)
TP8 (LCH)
GND
TP9 (RCH)
IC601 M62439SP E-VR/SOUND/FUNC CONTROL
CONTROL LOGIC
VREF
D601 VDD REG
D602 VSS REG
POWER AMP
AMP IN
AMP OUT
Q201 ~ 210
Q211 ~ Q214 SWITCHING DRIVER
Q109, 110 DC DET
Q107, 108 AC DET
Q106 HOLD SW
OVER LOAD DET Q215, 216
SP SHORT DET Q218
-VFL VOLTAGE CONST Q105
HEAD PHONE J201
Q112, Q115 POWER SW
RY101 RELAY
D101 ~ D104
Q102, 103, 111, 113 VM VOLTAGE CONST
VCC SW Q104
J202 SPEAKER
DECK1 EH
L CH R CH
DECK2 L CH R CH
CN351
CON351
CN301
CON301
Q455 BEAT SW EZ, K, G, HS ONLY
Q451 BIAS SW
BIAS OSC
BIAS OSC SW Q453, Q454
Q309, 310 DECK1 SW
REC MUTE Q443, 444
IC401 NJM4558LD REC EQ AMP
Q306 Q307 Q308 DECK1 SW
Q303, 304 DECK1 PB SW
DECK2 PB SW Q301, 302
IC301 NJM4558LD PB AMP
FIL-2
FIL-1
WH102
WH101
D AC2 C.B
PT101
C AC1 C.B
SIGNAL: PB/FM REC/AM
EZ, K, V: AC230V 50HZ
G: AC230 ~ 240V 50HZ
HS: AC220V 50/60HZ
HR, HC: AC120V/220 ~ 230V/240V 50/60HZ
HE: AC120V 220 ~ 240V 50/60HZ

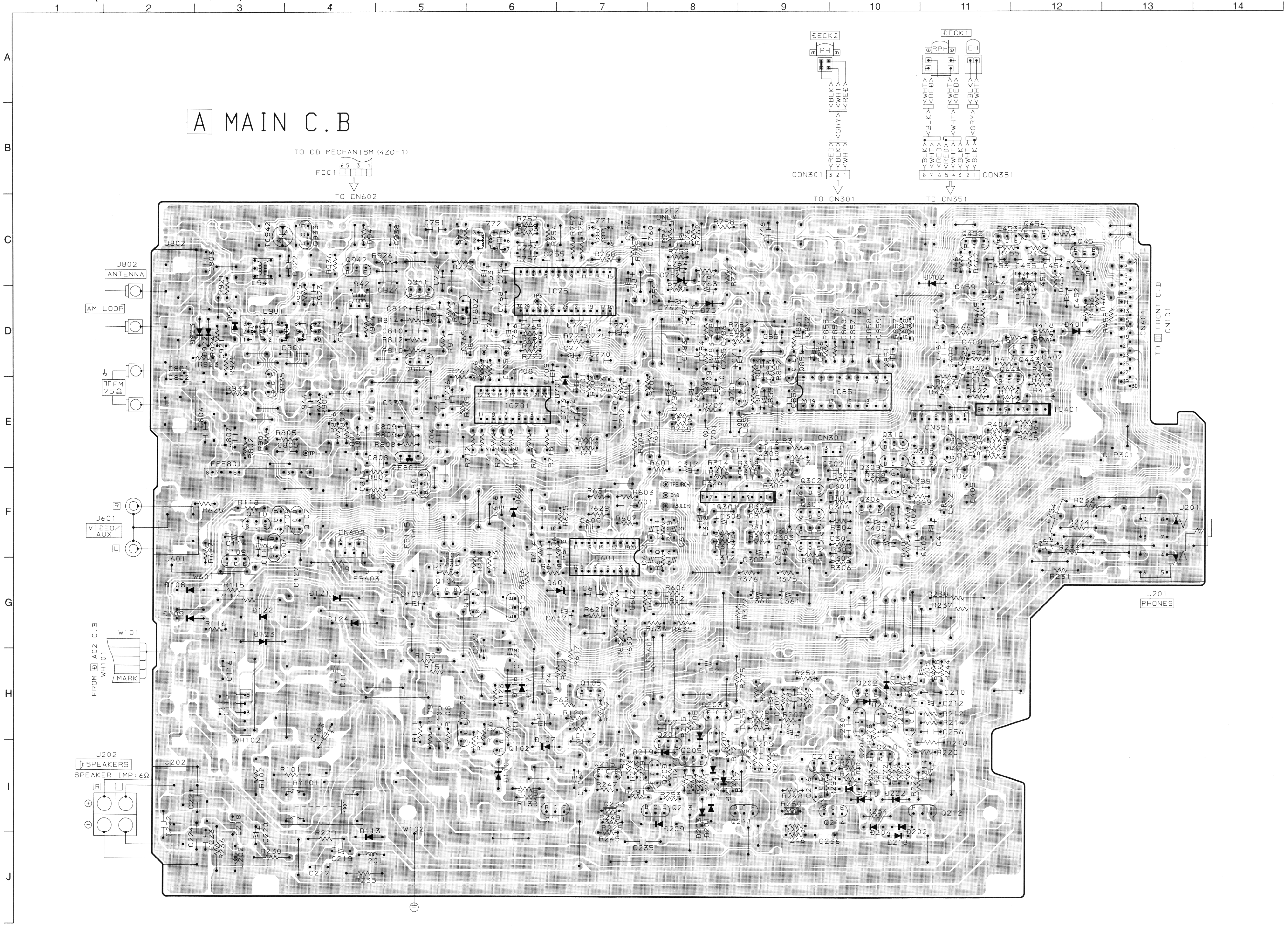
SCHEMATIC DIAGRAM – 1 (MAIN : HR, HE, HC)


A MAIN C.B
TUNER-PLL
IC701 LC72131D
TUNER-IF
IC751 LA1837 NL
DECODER
BUFFERS
TUNER-RF
FFE801 8ZA-1 FEUN FM FRONTEND PACK
J931 MW LOOP
J801 ANTENNA
CN601 30P H TYK-B
TO B FRONT C.B CN101
NC
TM_BASE
PLL_CLK
OSC/PLL_DATA
TUNE/IFC
STEREO
TU_ON
CD_ON
PLL-CE
PB1
BIAS
RMT
POWER
FIL-1
FIL-2
HOLD
+VM
-VFL
D-GND
VCC
MIC
A-GND
DECK 2
DECK 1
PB AMP
IC301 NJM4558L D
Q301 ~ 310 PB/REC SW
REC AMP
IC401 NJM4558L D
REC MUTE
BIAS SW
BIAS OSC
IC601 M62429SP
Q201 ~ 214 POWER AMP
Q215, 216 OVERLOAD DETECTOR
SP SHORT DETECT
Q107, 108 AC DET
Q109, 110 DC DET
HOLD
-VFL VOLTAGE CONST
Q102, 103, 111 +VM VOLTAGE CONST
Q112, 115 POWER SW
D-POWER
VCC SW
J601 VIDEO/AUX
CN602 TO CD MECHANISM
J201 PHONES
J202 SPEAKERS
SPEAKER IMP: 6Ω
RY101 12V DSA-SS-212
D AC2 C.B
C AC1 C.B
F101
HR, HC: AC 120V/220 ~ 230V/240V 50/60HZ
HE: AC 120V/220 ~ 240V 50/60HZ
SIGNAL:
:PB/FM
:REC/AM
:1N4148M<HC>
:1SS133 <OTHER>

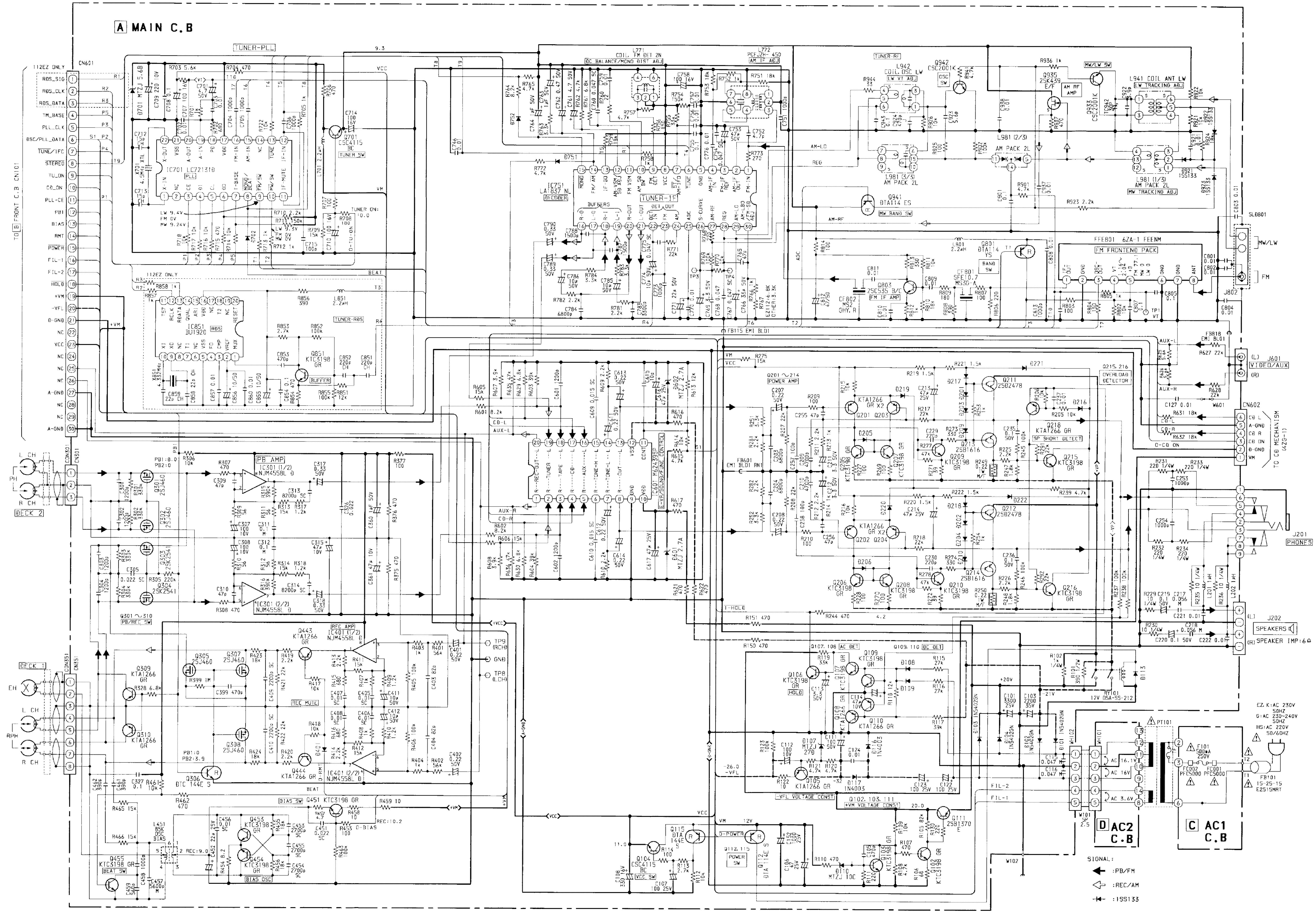
WIRING – 1 (MAIN : HR, HE, HC)


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
A MAIN C.B
TO CD MECHANISM (4ZG-1)
FCC1
TO CN602
DECK2
PH
BLK WHT RED
GRY
RED BLK WHT
CON301
TO CN301
DECK1
RPH
EH
CON351
TO CN351
J931
MW LOOP
J801
ANTENNA
SW LOOP
FM 75Ω
FFE801
CF801
J601
VIDEO/AUX
R
L
CN602
FROM D AC2 C.B WH101
W101
MARK
WH102
J202
SPEAKERS
SPEAKER IMP: 6Ω
RY101
W102
IC751
IC701
IC601
IC401
CN351
CN301
TP9 (RCH)
GND
TP8 (LCH)
CN601
TO B FRONT C.B CN101
CLP301
J201
PHONES

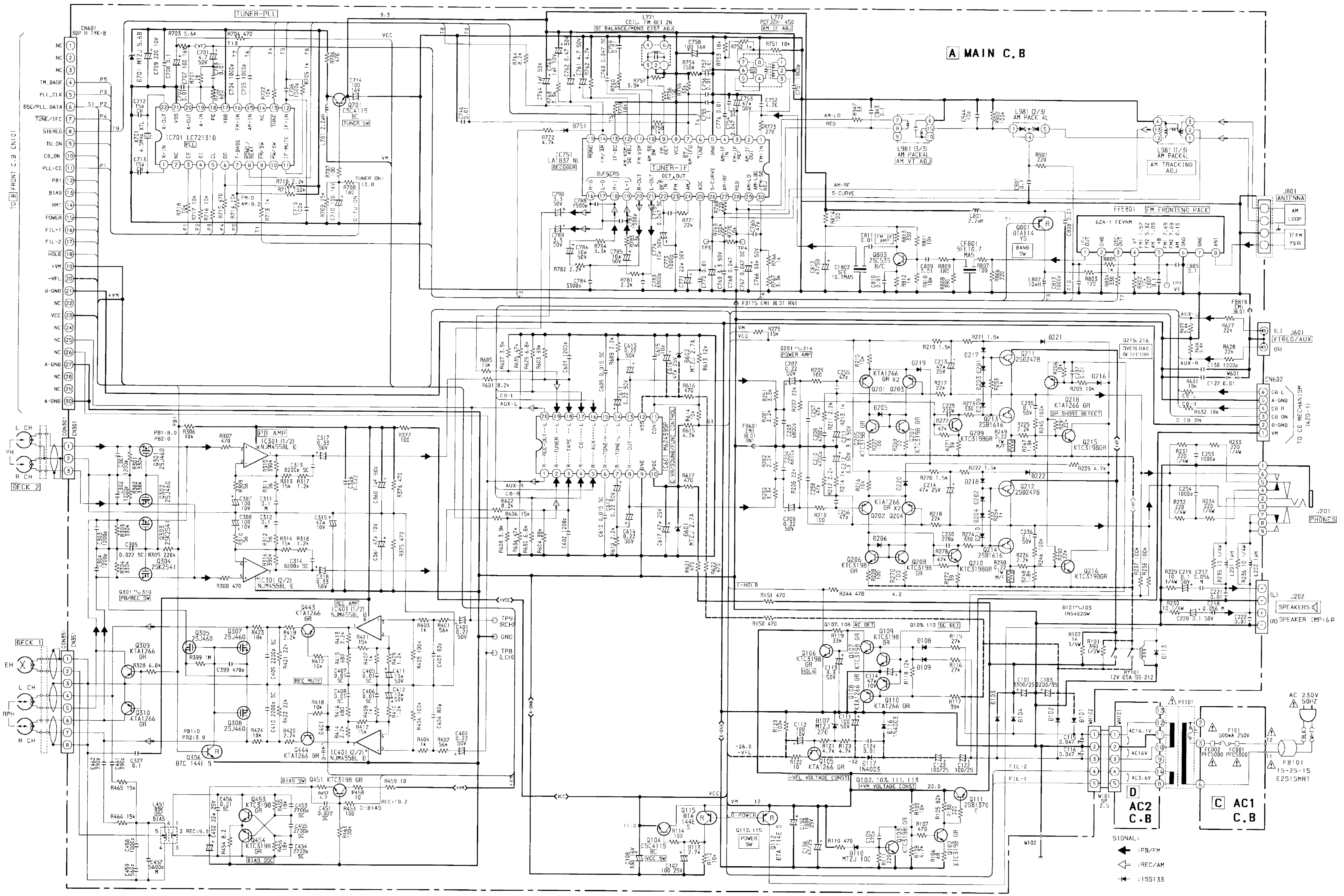
WIRING – 2 (MAIN : EZ, K, G, HS)


A MAIN C.B
TO CD MECHANISM (4ZG-1)
FCC1
TO CN602
DECK2
PH
DECK1
RPH
EH
CON301
TO CN301
CON351
TO CN351
J802
ANTENNA
AM LOOP
FM 75Ω
J601
VIDEO/AUX
R
L
FROM C AC2 C.B
W101
WH101
MARK
J202
SPEAKERS
SPEAKER IMP:6Ω
TO B FRONT C.B CN101
CN601
J201
PHONES
112EZ ONLY
IC751
IC701
IC851
IC401
IC601
CN602
CN301
CN351
RY101
W102

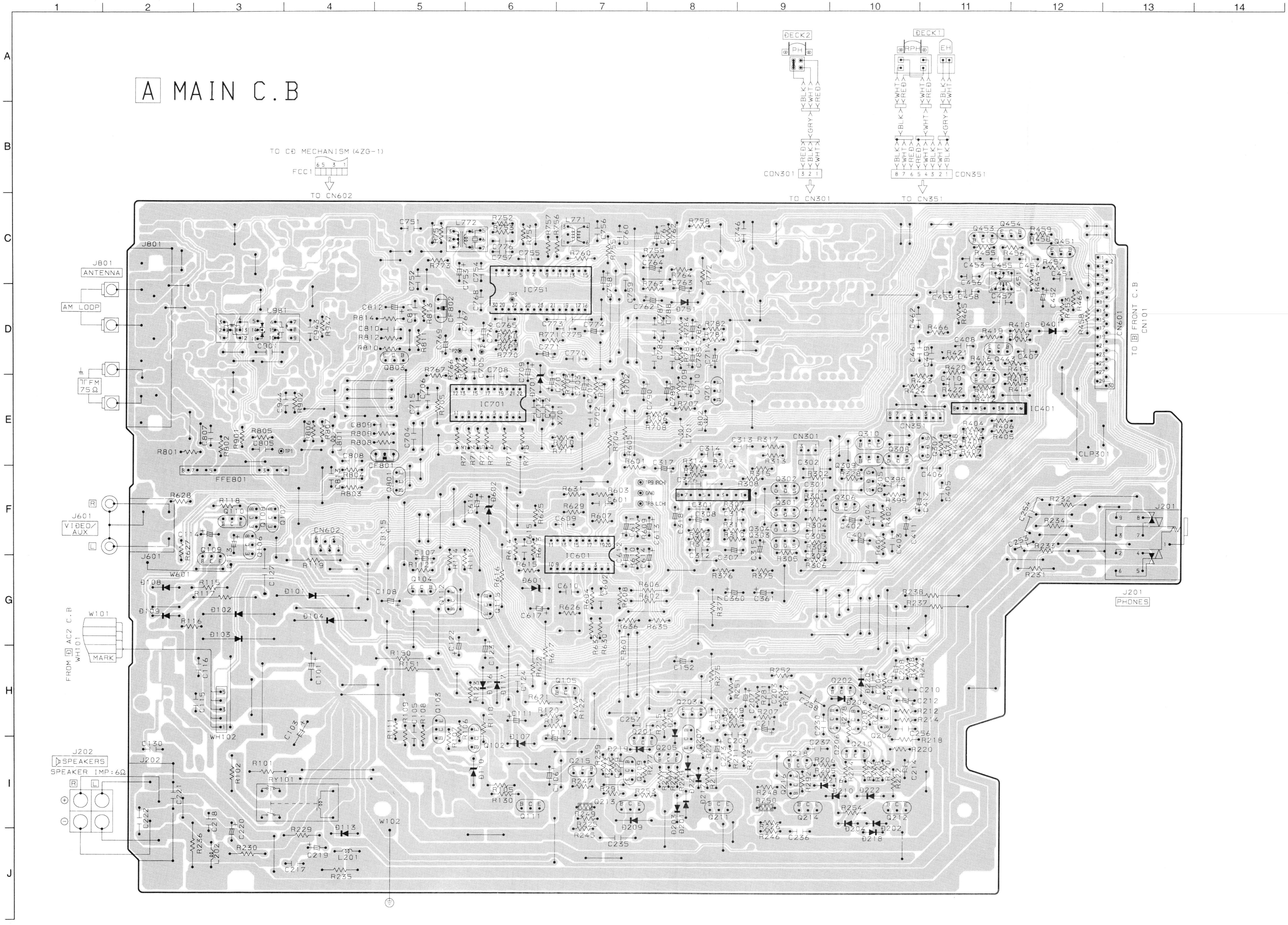
SCHEMATIC DIAGRAM – 2 (MAIN : EZ, K, G, HS)


A MAIN C.B
TUNER-PLL
IC701 LC72131B
PLL
IC751 LA1837 NL
DECODER
TUNER-IF
BUFFERS
IC851 BU1920
RDS
TUNER-RDS
BUFFER
TUNER SW
TUNER-RF
AM RF AMP
MW/LW SW
L941 COIL ANT LW
LW TRACKING ADJ
L942 COIL OSC LW
LW VT ADJ
L981 AM PACK 2L
MW TRACKING ADJ
Q941 DTA114 ES
MW BAND SW
FM IF AMP
FFE801 6ZA-1 FEENM
FM FRONTEND PACK
SL801
MW/LW
FM
J802
TO B FRONT C.B CN101
CN601
112EZ ONLY
RDS_SIG
RDS_CLK
RDS_DATA
TM_BASE
PLL_CLK
OSC/PLL_DATA
TUNE/IFC
STEREO
TU_ON
CD_ON
PLL-CE
PB1
BIAS
RMT
POWER
FIL-1
FIL-2
HOLD
+VM
-VFL
D-GND
NC
VCC
A-GND
DECK 2
DECK 1
PB AMP
IC301 (1/2) NJM4558L D
IC301 (2/2) NJM4558L D
Q301～310
PB/REC SW
REC AMP
IC401 (1/2) NJM4558L D
IC401 (2/2) NJM4558L D
REC MUTE
BIAS SW
BIAS OSC
BEAT SW
IC601 M62439SP
E-VR/SELECTOR/TONE CONTROL
Q201～214
POWER AMP
Q215,216
OVERLOAD DETECTOR
Q218 KTA1266 GR
SP SHORT DETECT
J601
VIDEO/AUX
CN602
TO CD MECHANISM (4ZG-1)
CD L
A-GND
CD R
CD ON
D-GND
J201
PHONES
J202
SPEAKERS
(R) SPEAKER IMP:6Ω
Q107,108 AC DET
Q109,110 DC DET
HOLD
RY101 12V DSA-SS-212
VFL VOLTAGE CONST
Q102,103,111
+VM VOLTAGE CONST
VCC SW
POWER SW
Q112,115
D AC2 C.B
C AC1 C.B
PT101
EZ,K:AC 230V 50HZ
G:AC 230-240V 50HZ
HS:AC 220V 50/60HZ
F101 500mA 250V
FB101 1S-2S-1S E2515NRT
SIGNAL:
:PB/FM
:REC/AM
:1SS133

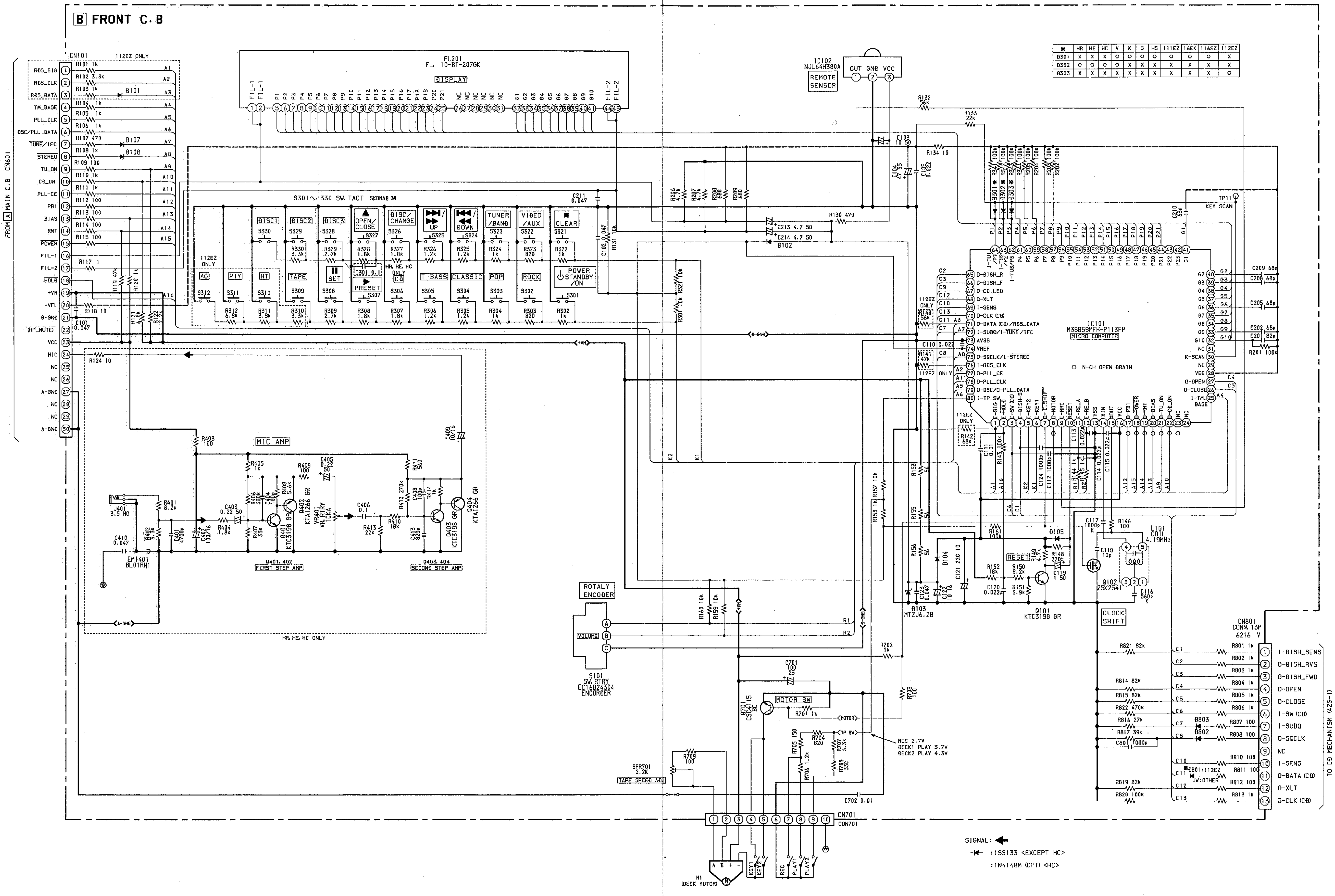
SCHEMATIC DIAGRAM – 3 (MAIN : V)


A MAIN C.B
TUNER-PLL
IC701 LC72131D PLL
IC751 LA1837 NL DECODER
TUNER-IF
BUFFERS
L771 COIL, FM BET 2N DC BALANCE/MONO DIST ADJ
L772 PCFJZH-450 AM IF ADJ
Q701 2SC4115 BC TUNER SW
L981 (2/3) AM PACK 4L
L981 (3/3) AM PACK4L AM VT ADJ
L981 (1/3) AM PACK4L AM TRACKING ADJ
FFE804 FM FRONTEND PACK
J801 ANTENNA AM LOOP 1FM 75Ω
CN601 30P H TYK-B
TO B FRONT C.B CN101
CN301 DECK 2
L CH R CH
IC301 (1/2) NJM4558L E PB AMP
IC301 (2/2) NJM4558L E
Q301~310 PB/REC SW
CN351 DECK 1
EH L CH R CH RPH
IC401 (1/2) NJM4558L D REC AMP
IC401 (2/2) NJM4558L D
REC MUTE
Q451 KTC3198 GR BIAS SW
Q453 KTC3198 GR Q454 KTC3198 GR BIAS OSC
L451 BSC OSC BIAS
IC601 M62429SP E.VR/SOUND/FUNC CONTROL
Q201~214 POWER AMP
Q215, 216 OVERLOAD DETECTOR
SP SHORT DETECT
J601 VIDEO/AUX (L) (R)
CN602 TO CD MECHANISM (4ZG-1)
CD L A-GND CD R CD ON D-GND VM
J201 PHONES
J202 SPEAKERS (L) (R) SPEAKER IMP: 6Ω
Q107, 108 AC DET
Q109, 110 DC DET
RY101 12V G5A-SS-212
-VFL VOLTAGE CONST
Q102, 103, 111, 113 +VM VOLTAGE CONST
Q104 2SC4115 BC VCC SW
Q112, 115 POWER SW
D POWER
W101 5P 2.5
D AC2 C.B
C AC1 C.B
PT101
F101 500mA 250V
FB101 15-25-15 E2515MRT
AC 230V 50HZ
SIGNAL:
:PB/FM
:REC/AM
:1SS133

WIRING – 3 (MAIN : V)


A MAIN C.B
TO CD MECHANISM (4ZG-1)
FCC1
TO CN602
DECK2
PH
CON301
TO CN301
DECK1
RPH
EH
CON351
TO CN351
J801
ANTENNA
AM LOOP
FM 75Ω
J601
VIDEO/AUX
R
L
FROM AC2 C.B
W101
WH101
MARK
J202
SPEAKERS
SPEAKER IMP: 6Ω
W102
IC751
IC701
IC601
IC401
CN601
TO FRONT C.B
CN101
J201
PHONES
CN301
CN351
CN602
FFE801
CLP301
RY101
WH102

SCHEMATIC DIAGRAM – 4 (FRONT)


B FRONT C.B
FROM A MAIN C.B CN601
CN101
112EZ ONLY
RDS_SIG
RDS_CLK
RDS_DATA
TM_BASE
PLL_CLK
OSC/PLL_DATA
TUNE/IFC
STEREO
TU_ON
CD_ON
PLL-CE
PB1
BIAS
RMT
POWER
FIL-1
FIL-2
HOLD
+VM
-VFL
D-GND
HP_MUTE
VCC
MIC
NC
A-GND
FL201
FL 10-BT-207GK
DISPLAY
IC102
NJL64H380A
REMOTE SENSOR
OUT GND VCC
S301～330 SW. TACT SKQNAB
DISC1
DISC2
DISC3
OPEN/CLOSE
DISC/CHANGE
UP
DOWN
TUNER/BAND
VIDEO/AUX
CLEAR
AG
PTY
RT
TAPE
SET
PRESET
CD
T-BASS
CLASSIC
POP
ROCK
POWER STANDBY/ON
HR, HE, HC ONLY
MIC AMP
J401 3.5 MO
EM1401 BL01RN1
Q401, 402 FIRST STEP AMP
Q403, 404 SECOND STEP AMP
KTC3198 GR
KTA1266 GR
VR401 VR. RTRY 10KA
IC101
M38B59MFH-P113FP
MICRO COMPUTER
N-CH OPEN DRAIN
KEY SCAN
TP11
RESET
Q101 KTC3198 GR
Q102 2SK2541
Q103 MTZJ6.2B
L101 COIL 4.19MHz
CLOCK SHIFT
ROTALY ENCODER
VOLUME
S101 SW. RTRY EC16B24304 ENCORDER
MOTOR SW
Q701 C5C4115 BC
SFR701 2.2K
TAPE SPEED ADJ
REC 2.7V
DECK1 PLAY 3.7V
DECK2 PLAY 4.3V
CN701
CON701
M1 (DECK MOTOR)
KEY1
KEY2
REC
PLAY1
PLAY2
CN801
CONN. 13P 6216 V
I-DISH_SENS
O-DISH_RVS
O-DISH_FWD
O-OPEN
O-CLOSE
I-SW (CD)
I-SUBQ
O-SQCLK
NC
I-SENS
O-DATA (CD)
O-XLT
O-CLK (CD)
TO CD MECHANISM (4ZG-1)
D801: 112EZ
JW: OTHER

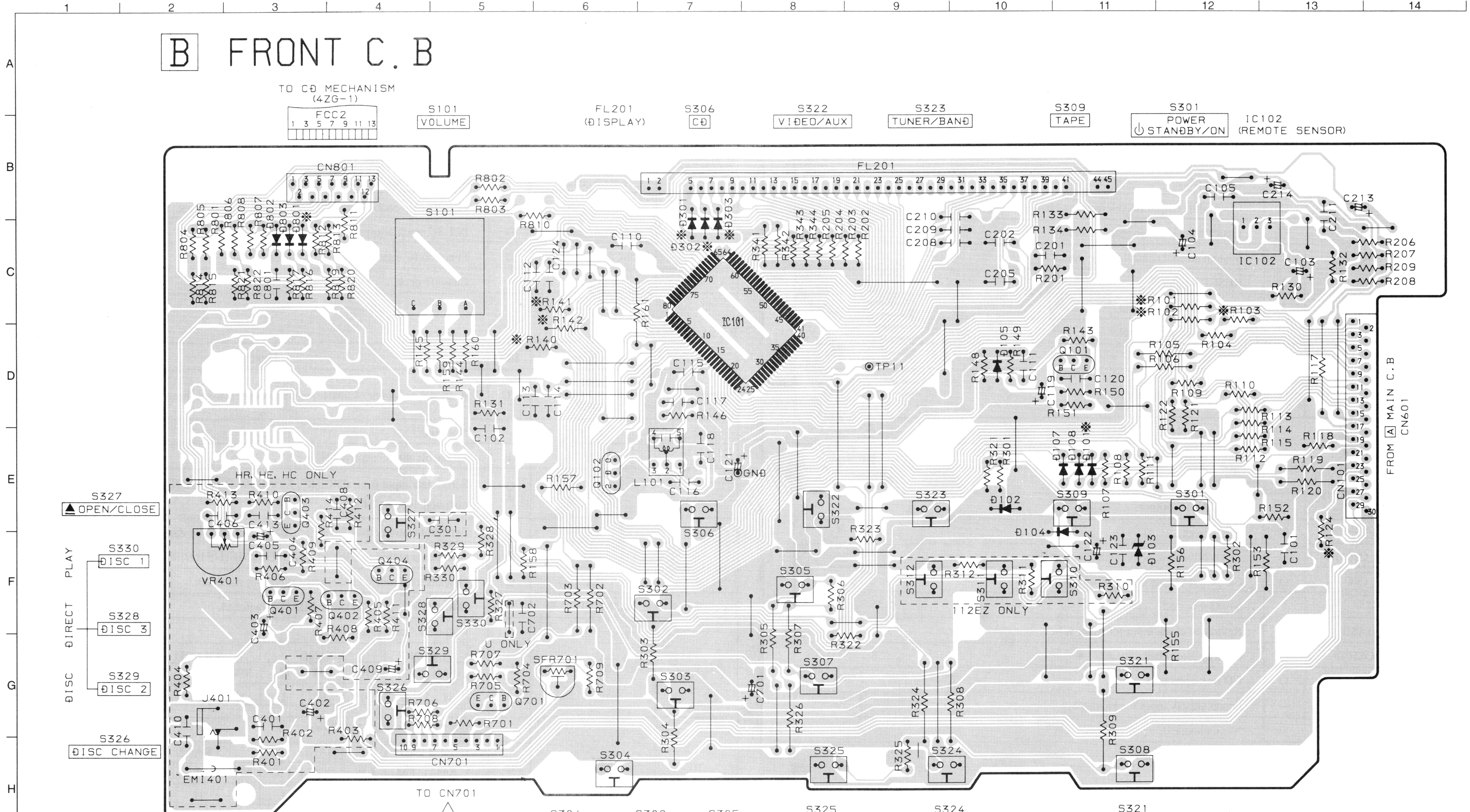
✱	HR	HE	HC	V	K	G	HS	111EZ	16EK	116EZ	112EZ
D301	X	X	X	O	O	O	O	O	O	O	X
D302	O	O	O	O	X	X	X	X	X	X	X
D303	X	X	X	X	X	X	X	X	X	X	O

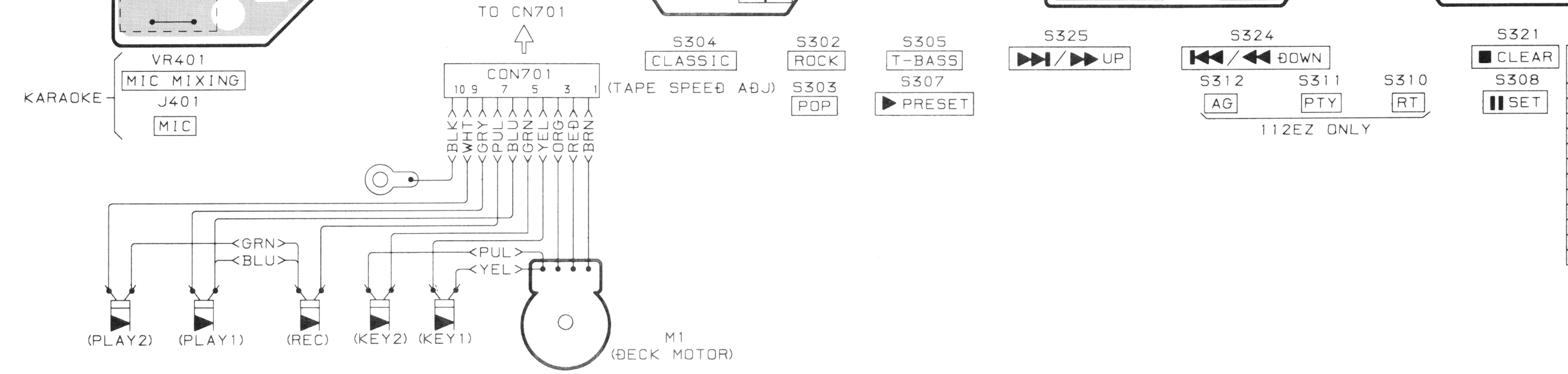
SIGNAL: ◀

|◀: 1SS133 <EXCEPT HC>

: 1N4148M (CPT) <HC>

WIRING – 4 (FRONT)


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
B FRONT C.B
TO CD MECHANISM (4ZG-1)
FCC2
S101 VOLUME
FL201 (DISPLAY)
S306 CD
S322 VIDEO/AUX
S323 TUNER/BAND
S309 TAPE
S301 POWER ⏻ STANDBY/ON
IC102 (REMOTE SENSOR)
CN801
FL201
IC101
TP11
GND
L101
HR, HE, HC ONLY
U ONLY
112EZ ONLY
SFR701
VR401
J401
EMI401
CN701
CN101
FROM A MAIN C.B CN601
S327 ▲ OPEN/CLOSE
PLAY S330 DISC 1
DIRECT S328 DISC 3
DISC S329 DISC 2
S326 DISC CHANGE
S302 S303 S304 S305 S307 S308 S310 S311 S312 S321 S324 S325
Q101 Q102 Q401 Q402 Q403 Q404 Q701
※D101 ※D301 ※D302 ※D303 ※D801
※R101 ※R102 ※R103 ※R124 ※R140 ※R141 ※R142


TO CN701
VR401 MIC MIXING
KARAOKE
J401 MIC
CON701
10 9 7 5 3 1
BLK WHT GRY PUL BLU GRN YEL ORG RED BRN
GRN BLU PUL YEL
(PLAY2) (PLAY1) (REC) (KEY2) (KEY1)
M1 (DECK MOTOR)
S304 CLASSIC
S302 ROCK
S303 POP
S305 T-BASS
S307 ▶ PRESET
(TAPE SPEED ADJ)
S325 ▶▶I/▶▶ UP
S324 I◀◀/◀◀ DOWN
S312 AG
S311 PTY
S310 RT
112EZ ONLY
S321 ■ CLEAR
S308 II SET

※	HR/HE/HC	V	K/G/HS/111EZ 16EZ/116EZ	112EZ
Đ101	X	X	X	0
Đ301	X	0	0	X
Đ302	0	0	X	X
Đ303	X	X	X	0
Đ801	X	X	X	0
R101	X	X	X	0
R102	X	X	X	0
R103	X	X	X	0
R124	0	X	X	X
R140	X	X	X	0
R141	X	X	X	0
R142	X	X	X	0

IC DESCRIPTION

IC, M38B59MFH-P113FP

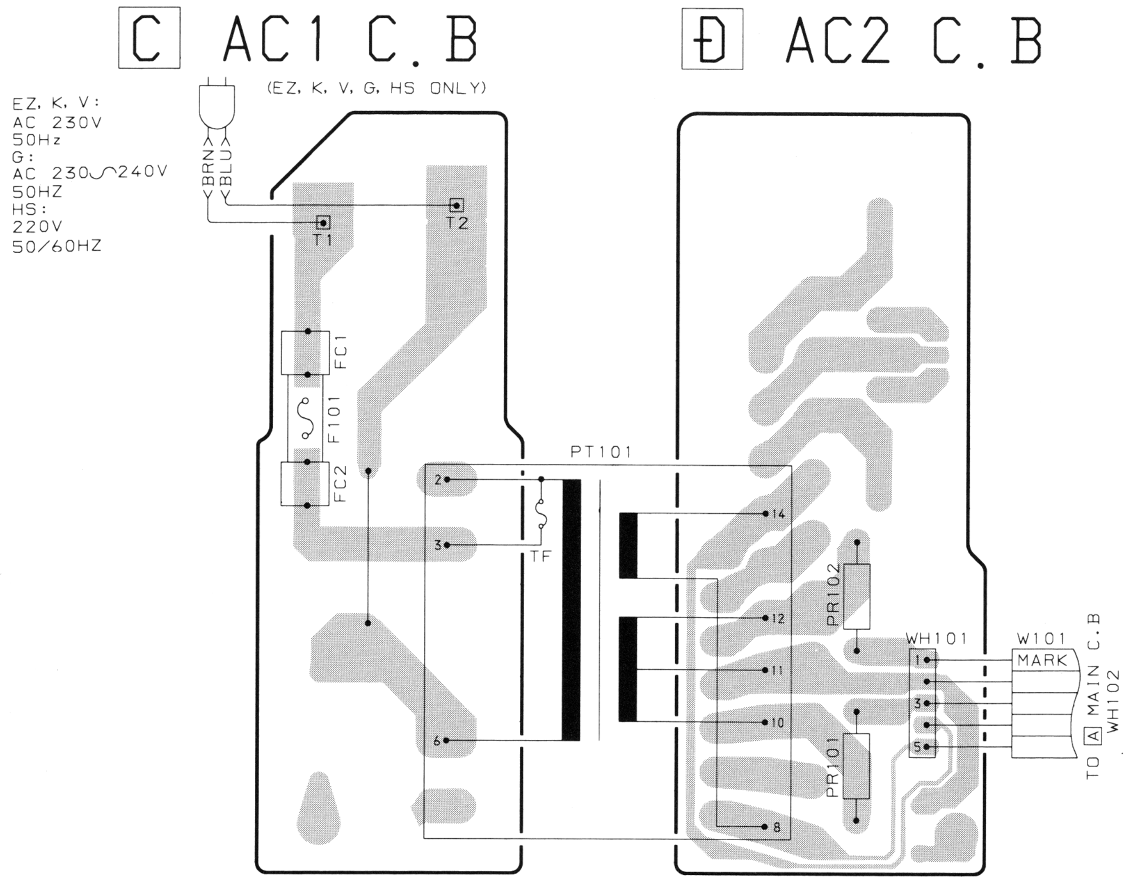
Pin No.	Pin Name	I/O	Description
1	I-RDS_SIG	I	Tuner RDS signal input <112EZ>.
2	I-HOLD	I	Hold input.
3	I-SW(CD)	I	CD mechanical switch input.
4	I-DISH	I	CD turntable photo sensor input.
5	I-KEY2	I	KEY input 1.
6	I-KEY1	I	KEY input 2.
7	O-C.SHIFT	O	Clock shift output for microcomputer when tuner receiving broadcast.
8	O-MOTOR	O	Cassette deck motor control output.
9	I-RMC	I	System remote control signal input.
10	RESET	I	RESET input.
11	I-RE_A	I	Rotary encoder A input.
12	I-RE_B	I	Rotary encoder B input.
13	VSS	–	Connected to GND.
14	XIN	–	4.19 MHz oscillator circuit.
15	XOUT	–	
16	VCC	–	Power supply.
17	O-PB1	O	Cassette deck output switching.
18	O-POWER	O	Power control output.
19	O-RMT	O	REC MUTE output.
20	O-BIAS	O	Bias output.
21	O-TU_ON	O	Tuner power supply ON/OFF output.
22	O-CD_ON	O	CD power supply ON/OFF output.
23,24	NC	–	Not Connected.
25	I-TM_BASE	I	Reference clock input for timer watch.
26	O-CLOSE	O	CD tray close data output.
27	O-OPEN	O	CD tray open data output.
28	VEE	–	Power supply input for FL display.
29	NC	–	Not Connected.
30	K-SCAN	O	Initial scan output.
31	NC	-	Not connected.
32~41	G10~G1	O	FL grid output G1~G10.
42~43	P23~P24	O	FL segment output (Not connected).
44~62	P21~P3	O	FL segment output.
63	P2	I/O	FL segment output.
64	P1	O	FL segment output.
65	O-DISH_REV	O	CD turntable reverse rotation output.
66	O-DISH_FWR	O	CD turntable forward rotation output.
67	O-CD_LED	O	CD flash window output.(Not connected).
68	O-XLT	O	CD IC control output.
69	I-SENS	I	CD IC control output.
70	O-CLK(CD)	O	CD clock output.
71	O-DATA(CD)/RDS_DATA	O/I	CD data output / Tuner RDS data input <112EZ>.

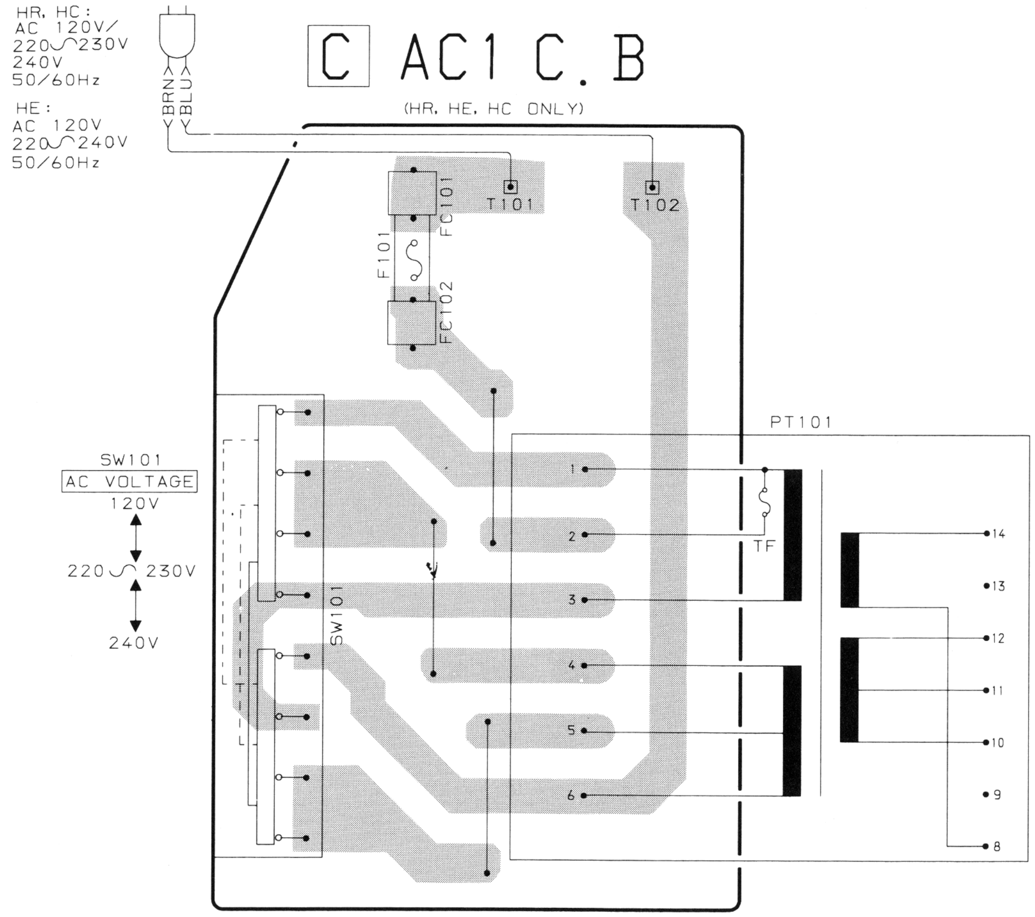
Pin No.	Pin Name	I/O	Description
72	O-SUBQ/ I-TUNE/I-IFC	O/I	CD SUBQ data output/ TUNER signal input/ TUNER IF count serial data input.
73	AVSS	–	Connected to GND.
74	VREF	–	Power supply.
75	O-SQCLK/I-$\overline{\text{STEREO}}$	O/I	CD SQCLK output/ TUNER STEREO detected input.
76	I-RDS_CLK	I	Tuner RDS clock input.<112EZ>.
77	O-PLL_CE	O	PLL IC chip enable output.
78	O-PLL_CLK	O	PLL IC clock output.
79	O-DSC/O-PLL DATA	O	Function IC control output / PLL data output.
80	I-TP_SW	I	Cassette deck.

IC, LC72131D

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>XIN</td><td rowspan="2">I/O</td><td rowspan="2">A crystal oscillator (4.5MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>XOUT</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>3</td><td>CE</td><td>I</td><td>To enable the IC. Active "H".</td></tr>
<tr><td>4</td><td>DI</td><td>I</td><td>Serial data input from CPU (IC, M38B59MFH-P109FP) when relevant key is operated. Active "H".</td></tr>
<tr><td>5</td><td>CL</td><td>I</td><td>Synchronization clock for serial data in (DI) or serial data out (DO).</td></tr>
<tr><td>6</td><td>DO</td><td>O</td><td>Serial data output to CPU (IC, M38B59MFH-P109FP).</td></tr>
<tr><td>7</td><td>T-BASE</td><td>O</td><td>Outputs a reference clock signal (8Hz) for the clock.</td></tr>
<tr><td>8</td><td>$\overline{\text{MONO}}$ / BEAT</td><td>O</td><td>Outputs "H" when MONO / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / $\overline{\text{SW}}$</td><td>O</td><td>Output "L" or "H" as follows:
<table>
<tr><td colspan="2">2 BAND</td><td colspan="3">3 BAND</td><td colspan="3">3 BAND</td></tr>
<tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>MW</td><td>SW</td><td>FM</td></tr>
<tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>10</td><td>$\overline{\text{MW}}$/SW</td><td>O</td><td>Outputs "L" or "H" as follows:
<table>
<tr><td colspan="2">2 BAND</td><td colspan="3">3 BAND</td><td colspan="3">3 BAND</td></tr>
<tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>MW</td><td>SW</td><td>FM</td></tr>
<tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
</table></td></tr>
<tr><td>11</td><td>IF-MUTE</td><td>O</td><td>To control internal counter.</td></tr>
<tr><td>12</td><td>IF-IN</td><td>I</td><td>General purpose counter input.</td></tr>
<tr><td>13</td><td>$\overline{\text{TUNE}}$</td><td>I</td><td>Receives "L" when station is tuned.</td></tr>
<tr><td>14</td><td>NC</td><td>–</td><td>Not connected.</td></tr>
<tr><td>15</td><td>AM-IN</td><td>I</td><td>Receives the AM local oscillator frequency signal.</td></tr>
<tr><td>16</td><td>FM-IN</td><td>I</td><td>Receives the FM local oscillator frequency signal.</td></tr>
<tr><td>17</td><td>VDD</td><td>–</td><td>Supply power to IC (+5V).</td></tr>
<tr><td>18</td><td>PD</td><td>O</td><td>PLL charge pump output.</td></tr>
<tr><td>19</td><td>A-IN</td><td>I</td><td rowspan="2">The MOS transistor for PLL active low pass filter.</td></tr>
<tr><td>20</td><td>A-OUT</td><td>O</td></tr>
<tr><td>21</td><td>VSS</td><td>–</td><td>Ground.</td></tr>
</table>

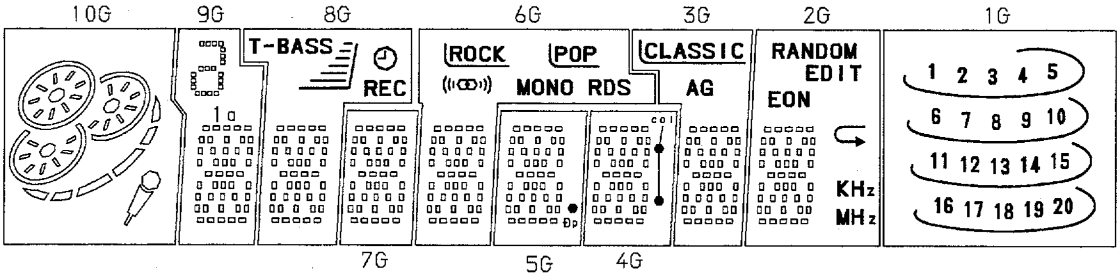
WIRING – 5 (POWER)

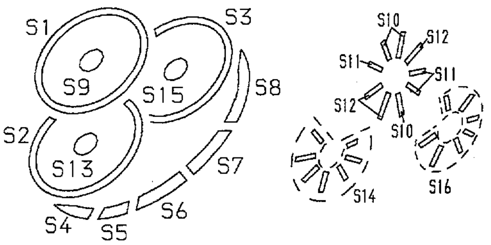

C AC1 C.B
(EZ, K, V, G, HS ONLY)
Đ AC2 C.B
EZ, K, V:
AC 230V
50Hz
G:
AC 230∽240V
50HZ
HS:
220V
50/60HZ
BRN
BLU
T1
T2
FC1
F101
FC2
PT101
2
3
6
TF
14
12
11
10
8
PR102
PR101
WH101
1
3
5
W101
MARK
TO A MAIN C.B
WH102


HR, HC:
AC 120V/
220∽230V
240V
50/60Hz
HE:
AC 120V
220∽240V
50/60Hz
BRN
BLU
C AC1 C.B
(HR, HE, HC ONLY)
T101
T102
FC101
F101
FC102
SW101
AC VOLTAGE
120V
220∽230V
240V
SW101
PT101
1
2
3
4
5
6
TF
14
13
12
11
10
9
8

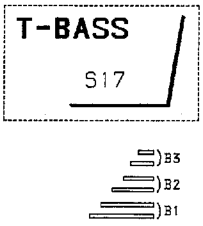
FL GRID ASSIGNMENT & ANODE CONNECTION

GRID ASSIGNMENT

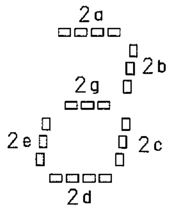

10G
9G
8G
6G
3G
2G
1G
T-BASS
REC
ROCK
POP
MONO RDS
CLASSIC
AG
RANDOM
EDIT
EON
KHz
MHz
1a
col
Dp
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
7G
5G
4G


S1
S3
S9
S15
S8
S2
S13
S7
S4
S5
S6
S10
S12
S11
S11
S12
S10
S14
S16

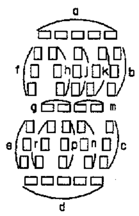
(10G)


T-BASS
S17
B3
B2
B1

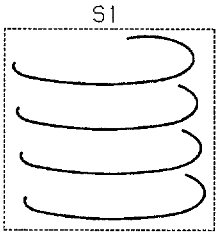
(8G)


2a
2b
2g
2e
2c
2d

(9G)


a
f
h
j
k
b
g
m
e
r
p
n
c
d

(2G ~ 9G)



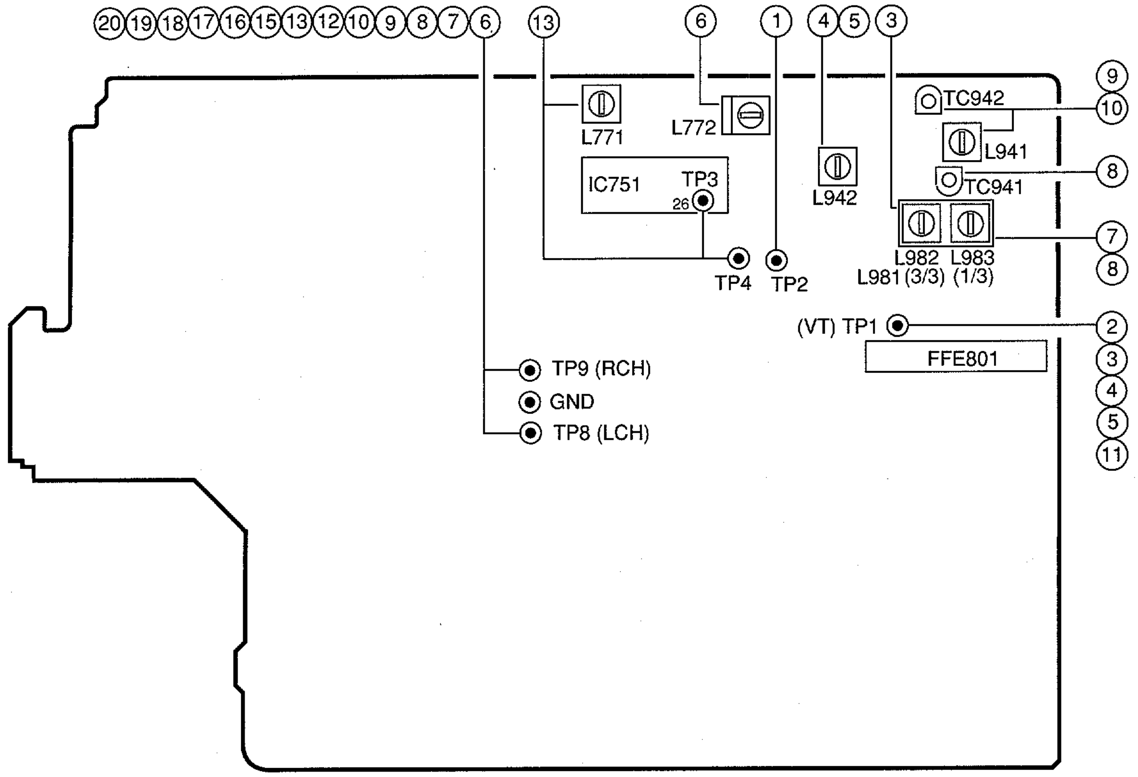
(1G)

ANODE CONNECTION

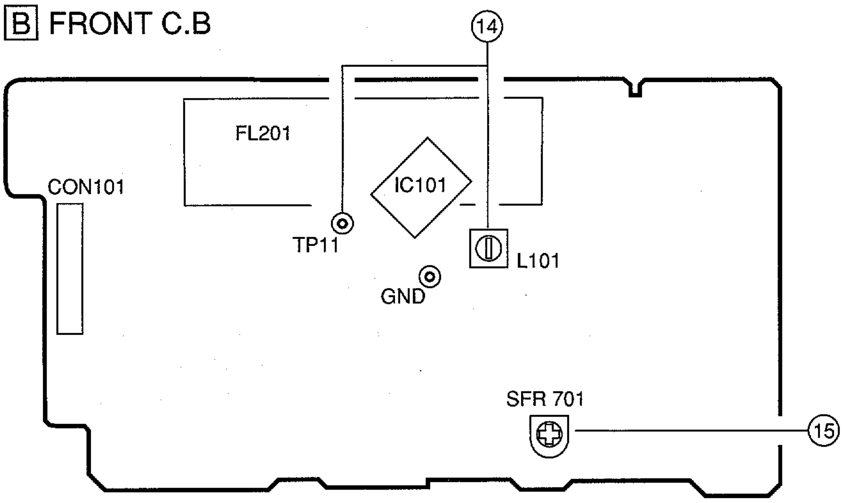
	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S6	1d	d	d	d	d	d	d	d	**20**
P2	S7	1n	n	n	n	n	n	n	n	**19**
P3	S8	1p	p	p	p	p	p	p	p	**18**
P4	S14	1r	r	r	r	r	r	r	r	**17**
P5	S13	1e	e	e	e	e	e	e	e	**16**
P6	S2	1c	c	c	c	c	c	c	c	**15**
P7	S16	1g	g	g	g	g	g	g	g	**14**
P8	S15	1m	m	m	m	m	m	m	m	**13**
P9	S3	1f	f	f	f	f	f	f	f	**12**
P10	S12	1b	b	b	b	b	b	b	b	**11**
P11	S11	1k	k	k	k	k	k	k	k	**10**
P12	S10	1j	j	j	j	j	j	j	j	**9**
P13	S9	1h	h	h	h	h	h	h	h	**8**
P14	S1	1a	a	a	a	a	a	a	a	**7**
P15	S5		**REC**		**((ꝏ))**	Dp	col (F)		**MHz**	**6**
P16	S4		🕘		**MONO**		col (E)		**KHz**	**5**
P17	🎤	2a, 2g, 2d	S17		**RDS**			**AG**	↪	**4**
P18		2e	B1		(ROCK)			(CLASSIC)	**EON**	**3**
P19		2c	B2		(POP)				**EDIT**	**2**
P20		2b	B3		**ROCK/POP**			**CLASSIC**	**RANDOM**	**1**
P21										S1

ADJUSTMENT <TUNER / DECK>

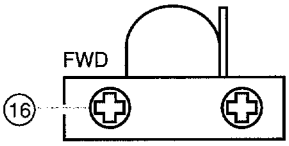
A MAIN C.B


⑳⑲⑱⑰⑯⑮⑬⑫⑩⑨⑧⑦⑥
⑬
⑥
①
④⑤③
L771
L772
IC751
TP3
26
TP4
TP2
L942
TC942
L941
TC941
L982 L983
L981 (3/3) (1/3)
(VT) TP1
FFE801
TP9 (RCH)
GND
TP8 (LCH)
⑨
⑩
⑧
⑦
⑧
②
③
④
⑤
⑪

B FRONT C.B


⑭
FL201
CON101
IC101
TP11
L101
GND
SFR 701
⑮

DECK–1 R/P/E HEAD
DECK–2 P HEAD



< TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2
   Method : Set to AM 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. AM/MW VT Check <EZ,K,V,G,HS>
   Settings : • Test point : TP1
   Method : Set to AM 1602kHz and AM 531kHz and check that the test point is less than 8.0V(1602kHz) and more than 0.6V(531kHz).

3. MW VT Adjustment <HR,HE,HC>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L982
   Method : Set to MW 1710kHz and adjust L982 so that the test point becomes 8.0V ± 0.05V. Then check that the test point is more than 0.3V (530kHz).

4. SW VT Adjustment <HR,HE,HC>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to SW 17.9MHz and adjust L942 so that the test point becomes 7.0V ± 0.05V. Then check that the test point is more than 0.3V (5.9MHz).

5. LW VT Adjustment <EZ,K,G,HS>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point is 1.3V ± 0.05V. Then check that the test point is less than 8.0V (290kHz).

6. AM /MW IF Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location : L772................450kHz

Method : The output level at 999/1000kHz is adjusted to maximum by L772.

7. MW Tracking Adjustment <EZ,K,G,V,HS>
Settings : • Test point : TP8(Lch), TP9(Rch)
• Adjustment location : L981(1/3)........999/1000kHz
Method : The output level at 999/1000kHz is adjusted to maximum by L981(1/3).

8. MW Tracking Adjustment <HR,HE,HC>
Settings : • Test point : TP8(Lch), TP9(Rch)
• Adjustment location : L983 ....603kHz
TC941 ....1404kHz
Method : Set up TC941 to center before adjustment. The output level at 603kHz is adjusted to maximum by L983. Then the output level at 1404kHz is adjusted to maximum by TC941.

9. LW Tracking Adjustment <EZ,K,G,HS>
Settings : • Test point : TP8(Lch), TP9(Rch)
• Adjustment location : L941........................144MHz
TC942 ....290MHz
Method : Set up TC942 to center before adjustment. The output level at 144kHz is adjusted to maximum by L941. Then the level at 290kHz is adjusted to maximum by TC942.

10. SW Tracking Adjustment <HR,HE,HC>
Settings : • Test point : TP8(Lch), TP9(Rch)
• Adjustment location : L941 ....5.9MHz
TC942 ....17.9MHz
Method : Set up TC942 to center before adjustment. The output level at 5.9MHz is adjusted to maximum by L941. Then the output level at 17.9 MHz is adjusted to maximum by TC942.

11. FM VT Check
Settings : • Test point : TP1
Method : <HR,HE,HC,EZ,K,G,HS>
Set to FM 108.0MHz and check that the test point is less than 8.0V. Set to FM 87.5MHz and check that the test point is more than 0.5V.
<V>
Set to FM 108.0MHz and check that the test point is less than 9.5V. Set to FM 65.0MHz and check that the test point is more than 1.0V.

12. FM Tracking Check
Settings : • Test point : TP8(Lch), TP9(Rch)
Method : Set to FM 98.0MHz and check that the test point is less than 9.0dBμV <HR,HE,HC> / 13.0dBμV <EZ,K,G, HS> / 8.0dBμV <V>.

13. DC Balance / Mono Distortion Adjustment
Settings : • Test point : TP3,TP4 / TP8,TP9
• Adjustment location : L771..........................98.0MHz
• Input level : 60 dBμV
Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V ±0.04V. Next, check that the distortion is less than 1.3%.

14. μ-con OSC Adjustment
Settings : • Test point : TP11
• Adjustment location : L101
Method : Insert AC plug with pressing TUNER function key. Adjust L101 so that the frequency across the test point is 58.538 ~ 58.422Hz.

< DECK SECTION >

15. Tape Speed Adjustment
Settings : • Test tape : TTA–100
• Test point : TP8(Lch), TP9(Rch)
• Adjustment location : SFR701
Method : Play back the test tape and adjust SFR701 so that the frequency counter reads 3000Hz ± 5Hz.

16. Head Azimuth Adjustment (DECK 1, DECK 2)
Settings : • Test tape : TTA–330
• Test point : TP8(Lch), TP9(Rch)
• Adjustment location : Azimuth adjustment screw
Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum. Perform on FWD PLAY and REV PLAY mode.

17. PB Frequency Response Check (DECK 1, DECK 2)
Settings : • Test tape : TTA–330
• Test point : TP8(Lch), TP9(Rch)
Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is within 5dB.

18. PB Sensitivity Check (DECK 1, DECK 2)
Settings : • Test tape : TTA–200
• Test point : TP8(Lch), TP9(Rch)
Method : Play back the test tape and check the signal level of the test point is 110mV ± 3.0dB.

19. REC/PB Frequency Response Check
Settings : • Test tape : TTA–602
• Test point : TP8(Lch), TP9(Rch)
• Input signal : 1kHz / 8kHz, -26dBV (LINE IN)
Method : Apply 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 8~10mV. Record and play back the 1kHz and 8kHz signals and check that the output is 0dB ± 5dB with respect to that of the 1kHz signal.

20. REC/PB Sensitivity Check
Settings : • Test tape : TTA–602
• Test point : TP8(Lch), TP9(Rch)
• Input signal : 1kHz, -6dBV (LINE IN)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8,TP becomes 80~100mV. Record and play back the 1kHz signals and check that the output is -2.0dB ± 3.5dB.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity : (THD 3%)	HR,HE,HC : Less than 10dBµV[at 87.5MHz] Less than 9dB[at 98.0/108.0MHz] V : Less than 12dB[at 70.0MHz] Less than 10dBµV[at 87.5MHz] Less than 9dB[at 98.0/108.0MHz] EZ,K,G,HS : Less than 14dBµV[at 87.5MHz] Less than 13dB[at 98.0/108.0MHz]
S/N 50dB Quieting sensitivity : (Stereo)	HR,HE,HC,V : Less than 35dB[at 98.0MHz] EZ,K,G,HS : Less than 38dB[at 98.0MHz]
Signal to noise ratio :	More than 68dB (mono)[at 98.0MHz] HR,HE,HC,V : More than 66dB (stereo)[at 98.0MHz] EZ,K,G,HS : More than 66dB (stereo)[at 98.0MHz]
Distortion :	Less than 1.2% (mono)[at 83.0MHz/98.0MHz] Less than 2.0% (stereo)[at 98.0MHz]
Stereo separation :	HR,HE,HC,EZ,K,G,HS : More than 12dB[at 98.0MHz] V : More than 22dB[at 98.0MHz]

<AM/MW SECTION>

Sensitivity : (S/N 20 dB)	Less than 60dBµV [at 600/603kHz] Less than 58dBµV [at 999/1000/1400/1404kHz]
Signal to noise ratio :	More than 36dB(mono)[at 999/1000kHz]
Distortion :	Less than 1.5% (mono)[at 999/1000kHz]

<SW SECTION> (HR,HE,HC)

Sensitivity :	Less than 51dBµV [at 5.9MHz] Less than 45dBµV [at 12.0 MHz] Less than 44dBµV [at 17.9MHz]
Distortion :	Less than 10% [at 12.0MHz]

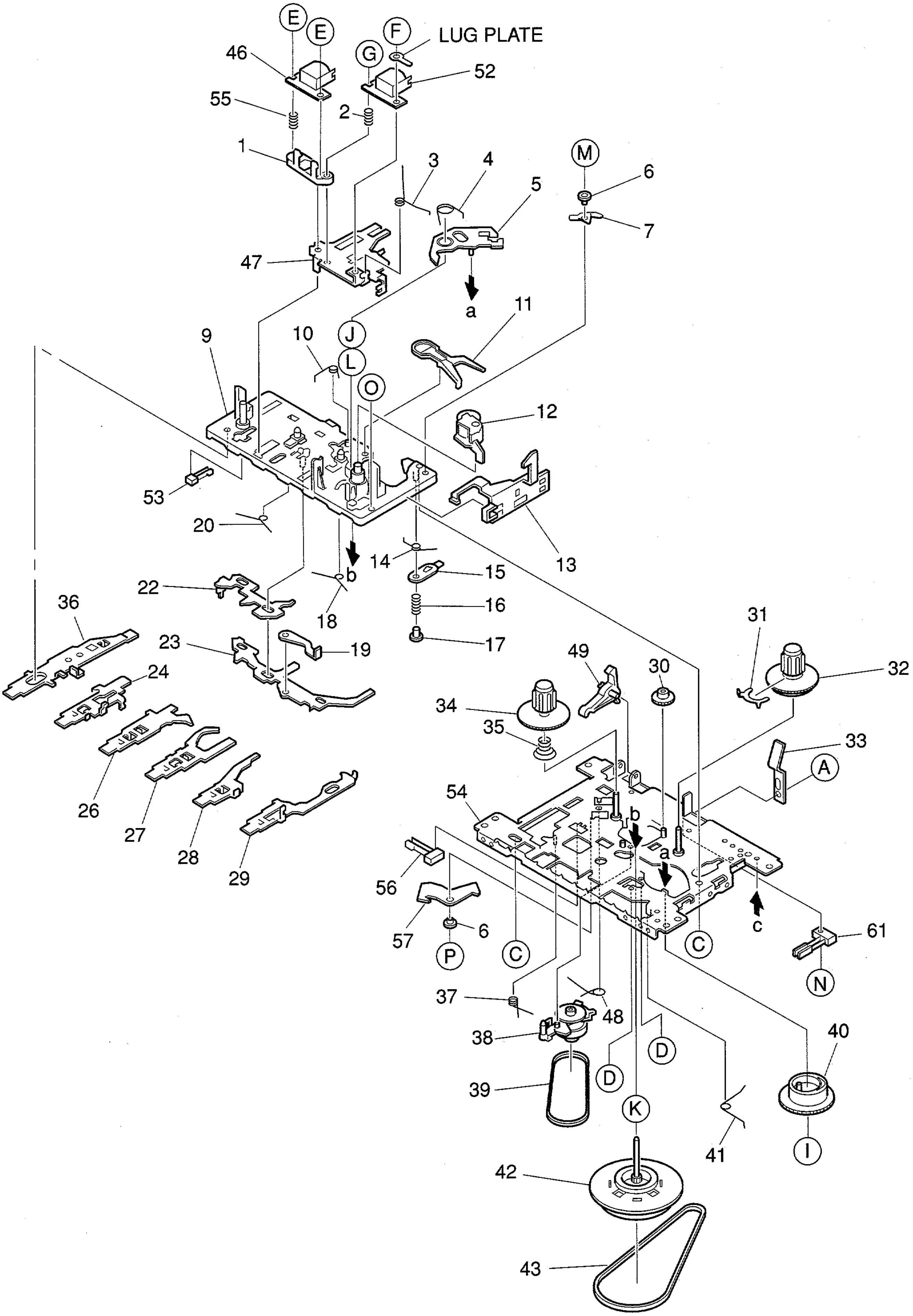
<LW SECTION> (EZ,K,G)

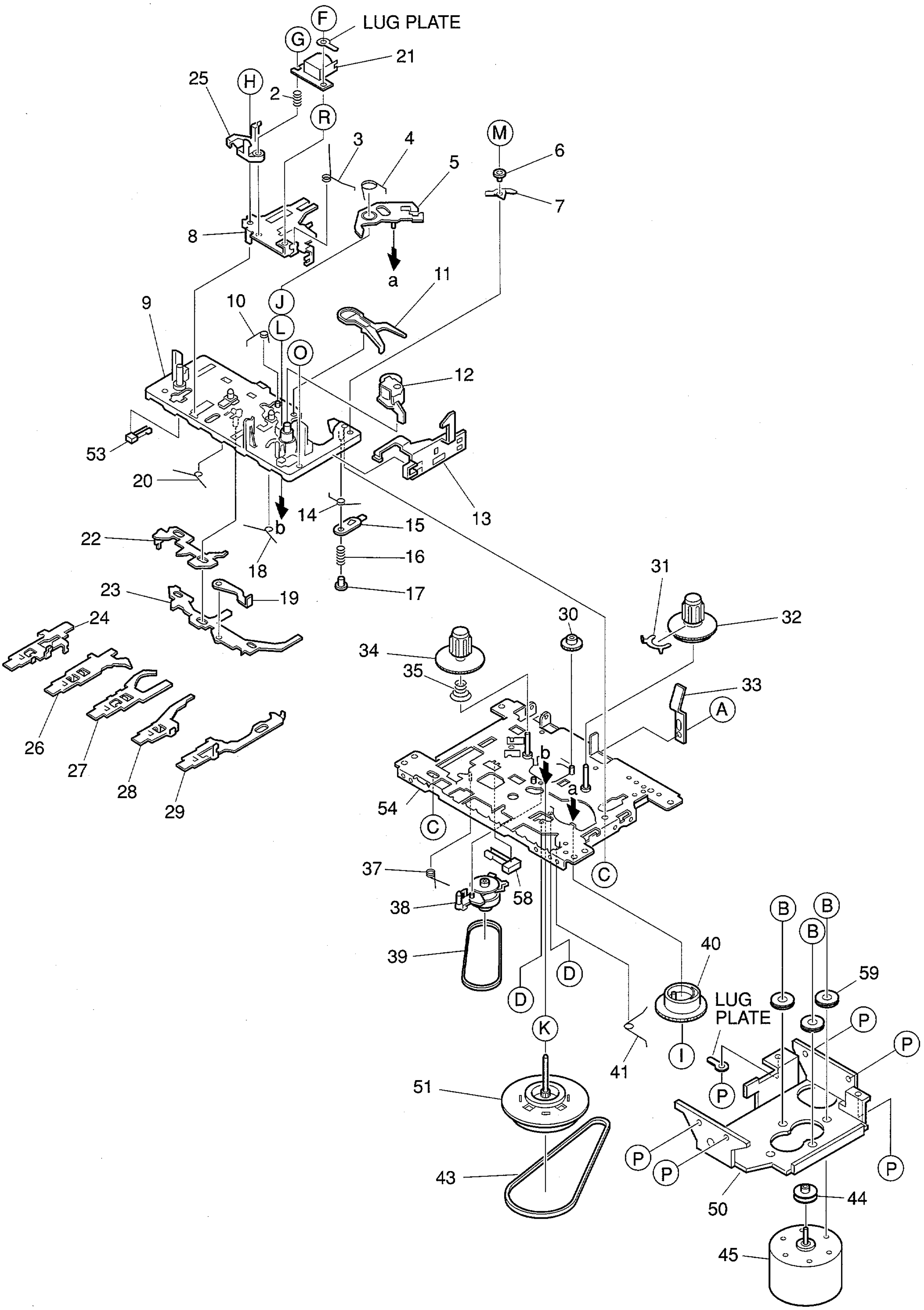
Sensitivity :	Less than 70dB [at 144kHz] Less than 68dB [at 198kHz] Less than 66dB [at 290kHz]

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.35% (R.M.S)
Take-up torque :	30 ~ 60g/cm (FWD)
Back tension :	2 ~ 5g/cm
PB Output level :	2.8V ± 3dB
Distortion (REC/PB) :	Less than 2.0% (NORM)
Noise level (PB) :	Less than 40mV (NORM)
Noise level (REC/PB) :	Less than 40mV(NORM)
Erasing ratio:	More than 60dB (at 125Hz,+10VU)

TAPE MECHANISM EXPLODED VIEW 1/1


E
E
F
LUG PLATE
46
G
52
55
2
1
3
4
M
6
5
7
47
a
11
9
10
J
L
O
12
53
20
13
14
15
b
22
18
16
36
17
23
19
31
49
30
32
24
34
35
33
26
A
27
54
b
28
a
29
56
c
6
61
57
P
C
C
N
37
48
38
40
D
D
39
D
K
41
I
42
43



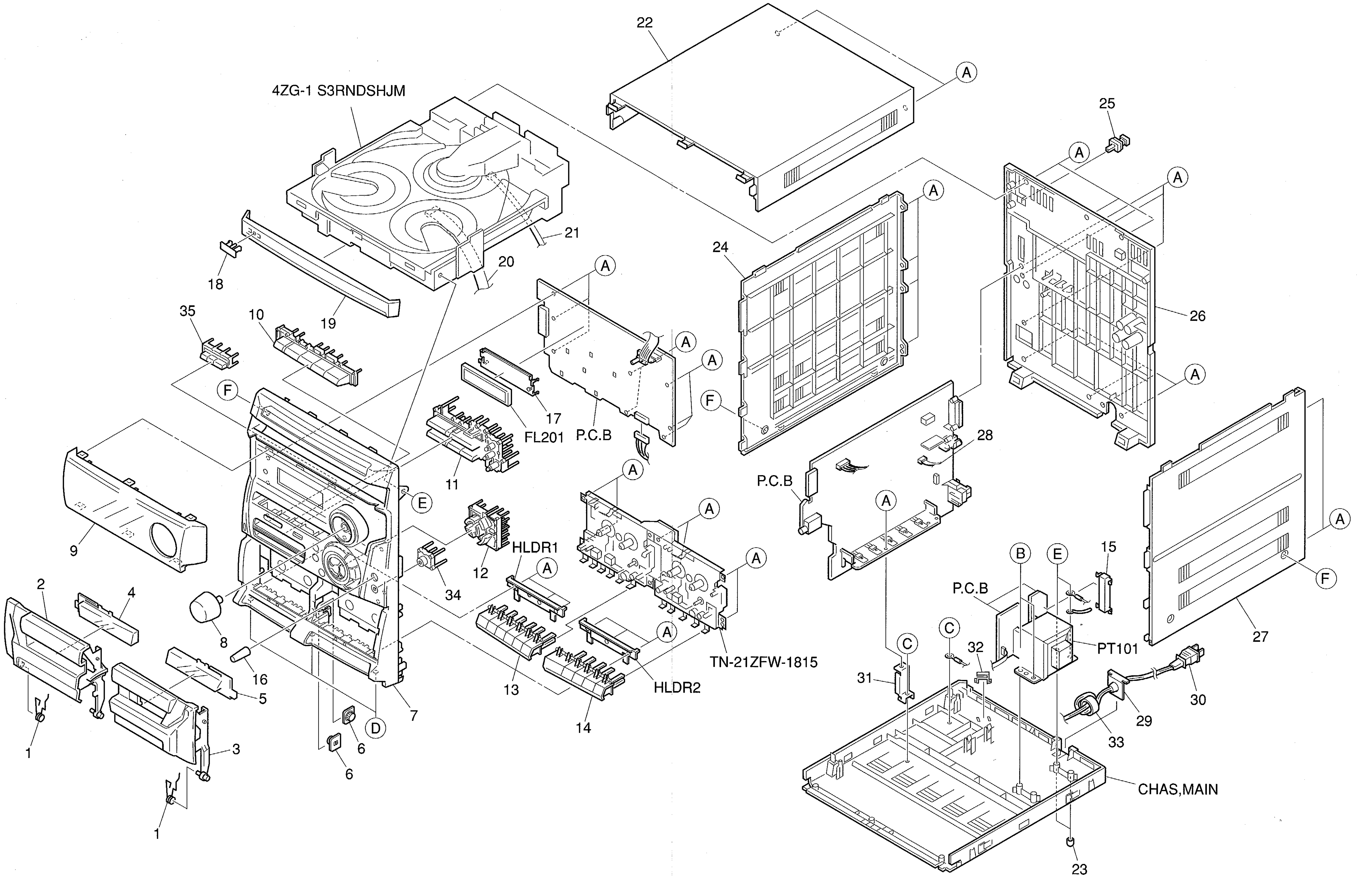
LUG PLATE
F
G
H
R
M
a
J
L
O
b
A
b
a
C
C
B
B
B
D
D
D
LUG PLATE
P
P
P
K
I
P
P
P
P

TAPE MECHANISM PARTS LIST 1/1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-060		HEAD BASE
2	S1-821-030-070		AZIMUTH SPRING
3	S1-921-030-090		PANEL P SPRING
4	S1-921-260-050		GEAR PLATE SPRING
5	S1-921-265-020		GEAR PLATE ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-110		HEAD PANEL
9	S1-921-143-160		BASE ASSY
10	S1-921-141-8A0		M CONTROL SPRING
11	S1-921-260-4A0		SENSING LEVER
12	S1-921-043-100		PINCH ROLLER ARM ASSY
13	S1-921-130-020		EJECT SLIDE LEVER
14	S1-921-141-3A0		P CONTROL SPRING
15	S1-921-140-550		PAUSE LEVER(E)
16	S1-921-140-120		PAUSE LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER
18	S1-921-140-150		BUTTON LEVER SPRING(B)
19	S1-821-011-590		E KICK LEVER
20	S1-921-140-140		BUTTON LEVER SPRING(A)
21	S6-201-010-750		P HEAD RP-7442ES-0951
22	S1-921-140-090		SWITCH ACTUATOR
23	S1-921-140-380		PUSH BUTTON ACTUATOR
24	S1-921-140-230		PLAY BUTTON LEVER
25	S1-921-030-4A0		HEAD BASE
26	S1-921-140-240		REW BUTTON LEVER
27	S1-921-140-250		FF BUTTON LEVER
28	S1-921-140-260		STOP BUTTON LEVER
29	S1-921-140-610		PAUSE BUTTON LEVER
30	S1-821-100-700		FF GEAR
31	S1-921-050-060		SENSOR
32	S1-921-053-100		TAKE UP REEL ASSY
33	S1-829-100-010		PACK SPRING
34	S1-921-050-150		S REEL HUB
35	S1-921-050-220		BACK TENSION SPRING
36	S1-921-140-220		REC BUTTON LEVER
37	S1-921-140-170		P.S.LEVER SPRING
38	S1-921-073-080		RF CLUTCH ASSY
39	S1-921-070-030		RF BELT
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-093-210		FLYWHEEL ASSY
43	S1-921-090-400		MAIN BELT
44	S1-921-120-130		MOTOR PULLEY
45	S6-002-030-290		MOTOR EG530YD-2BH
46	S6-207-140-030		E HEAD TC-2131
47	S1-921-030-120		HEAD PANEL
48	S1-921-140-210		REC BUTTON LEVER SPRING
49	S1-821-100-690		RECORD SAFETY LEVER
50	S1-921-120-110		MOTOR BRACKET
51	S1-921-093-240		FLYWHEEL ASSY
52	S6-201-011-110		HEAD,RP7442ES-0951
53	S6-401-011-490		LEAF SW MSW-1541T
54	S1-921-015-010		CHASSIS ASSY
55	S1-821-030-080		EH SPRING
56	S6-401-011-610		LEAF SW MSW-17820MVEI
57	S1-921-020-010		REC ARM
58	S6-401-010-380		LEAF SWITCH MSW-1275
59	S1-820-130-060		MOTOR RUBBER
A	S9-P04-200-310		C TAPPING SCREW 2-3
B	S1-821-120-020		MOTOR COLLER SCREW
C	S9-B10-200-510		P TAPPING BIND SCREW M2-5
D	S9-C07-204-510		SCREW,TAPPING(CAMERA)M2-4.5
E	87-251-095-410		+-CAP SCREW M2-8
F	S9-B01-200-310		(+)BIND SCREW M2-3
G	S9-F08-200-710		AZIMUTH SCREW M2-7
H	S9-P01-200-610		SCREW,M2-6
I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
K	S9-W01-400-100		P WASHER 2-3.5-0.4
L	S9-W01-130-200		P WASHER 2.1-4-0.13
M	S9-P08-203-010		PS TAPPING SCREW M2-3
N	S9-P04-200-510		C TAPPING SCREW M2-5
O	S9-P05-200-610		SCREW,TAP S M 2-6
P	S9-P04-200-410		C TAPPING SCREW M2-4

MECHANICAL EXPLODED VIEW 1 / 1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CHAS,MAIN
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23

MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-NF7-218-010		SPR-T,CASS
2	8Z-NFA-003-010		BOX,CASS 1<exp 116HC,116EZ>
2	8Z-NFA-031-010		BOX,CASS 1 BLK<116HC,116EZ>
3	8Z-NFA-004-010		BOX,CASS 2<except 116HC,116EZ>
3	8Z-NFA-032-010		BOX,CASS 2P BLK<116HC,116EZ>
4	8Z-NFA-008-010		WINDOW,CASS 1
5	8Z-NFA-009-010		WINDOW,CASS 2
6	86-NFZ-231-010		DMPR,70
7	8Z-NFA-002-010		CABI,FR H<HE,HR>
7	8Z-NFA-001-010		CABI,U<111EZ,16EZ,K,G,V,HS>
7	8Z-NFA-021-010		CABI,FR EZ<112EZ>
7	8Z-NFA-030-110		CABI,FR BLK<116EZ>
7	8Z-NFA-103-010		CABI,FR H BLK<116HC>
8	8Z-NFA-017-010		KNOB,RTRY VOL
9	8Z-NFA-023-010		WINDOW,DISP H<HE,HR>
9	8Z-NFA-024-010		WINDOW,DISP EZ112<112EZ>
9	8Z-NFA-029-010		WINDOW,DISP EZ<111EZ,K,G,V,HS>
9	8Z-NFA-040-010		WINDOW,DISP EZ116<116EZ>
9	8Z-NFA-102-010		WINDOW,DISP EZ16<16EZ>
9	8Z-NFA-104-010		WINDOW,DISP H116<116HC>
10	8Z-NFA-010-010		KEY,FUN<exp 116HC,116EZ>
10	8Z-NFA-041-010		KEY,FUN BLK<116HC,116EZ>
11	8Z-NFA-011-010		KEY,OPE<exp HC,116EZ>
11	8Z-NFA-042-010		KEY,OPE BLK<116HC,116EZ>
12	8Z-NFA-012-010		KEY,CD
13	8Z-NFA-013-010		KEY,CASS 1<exp HC,116EZ>
13	8Z-NFA-037-010		KEY,CASS 1 BLK<116HC,116EZ>
14	8Z-NFA-014-010		KEY,CASS 2P<exp HC,116EZ>
14	8Z-NFA-038-010		KEY,CASS 2 BLK<HC,116EZ>
⚠ 15	87-A90-165-010		SW,SL 1-2-3 SWS2301<HE,HR,HC>
16	87-NB8-017-010		KNOB,RTRY MIC<HE,HR,HC>
17	8Z-NFA-204-010		GUIDE,FL 100-25
18	82-NE6-067-010		BADGE,AIWA 30N
19	8Z-NFA-006-010		PANEL,TRAY<exp HC,116EZ>
19	8Z-NFA-034-010		PANEL,TRAY BLK<HC,116EZ>
20	83-NE2-618-110		F-CABEL,5P-2.5
21	88-913-221-110		FF-CABLE, 13P 1.25 220MM
22	8Z-NFA-005-010		PANEL,TOP<exp HC,116EZ>
22	8Z-NFA-033-110		PANEL,TOP BLK<exp HC,116EZ>
23	8Z-NB8-240-010		COVER, PL
24	8Z-NFA-020-110		PANEL,RIGHT SV-2<exp HC,116EZ>
24	8Z-NFA-036-010		PANEL,RIGHT SV-2 B<HC,116EZ>
25	84-ZG1-245-210		CAP,OPTICAL
26	8Z-NFA-080-210		CABI,REAR HEJSTM<HE>
26	8Z-NFA-062-210		CABI,REAR HRJSTM<HR>
26	8Z-NFA-064-210		CABI,REAR KSTM<K>
26	8Z-NFA-065-210		CABI,REAR EZSTM<111EZ>
26	8Z-NFA-066-210		CABI,REAR VSTM<V>
26	8Z-NFA-076-210		CABI,REAR EZSTM112<112EZ>
26	8Z-NFA-082-210		CABI,REAR EZBM116<116EZ>
26	8Z-NFA-089-110		CABI,REAR EZ W/O SPEC<HS>
26	8Z-NFA-091-010		CABI,REAR GSTM<G>
26	8Z-NFA-092-010		CABI,REAR EZSTM16<16EZ>
26	8Z-NFA-093-010		CABI,REAR HCBC116<116HC>
27	8Z-NFA-018-010		PANEL,LEFT V-2<exp HC,116EZ>
27	8Z-NFA-035-110		PANEL,LEFT V-2 B<HC,116EZ>
28	88-906-251-110		FF-CABLE,6P 1.25
29	87-085-185-010		BUSHING, AC CORD (E)
⚠ 30	87-050-079-010		AC-CORD ASSY,E BLK<HR,HE,V,K,EZ>
⚠ 30	87-050-081-110		AC-CORD ASSY,G<G>
⚠ 30	87-A80-006-010		AC-CORD ASSY,HS<HS>
⚠ 30	87-A80-083-010		AC-CORD,HC BLK<HC>
31	88-NF9-213-010		HLDR,PWB MAIN
32	87-NF4-221-010		HLDR,CABLE
33	87-003-317-010		F-BEAD,15-25-15<exp HR,HE,HC>
34	8Z-NFA-100-010		COVER,MIC<HR,HE>
34	8Z-NFA-105-010		COVER,MIC<116HC>
⚠ 35	87-099-881-010		PLUG,ADPTR CONV<K>
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-078-191-010		S-SCREW,IT+4-10
C	87-067-584-010		TAPPING SCREW, BVT2+3-6
D	87-067-688-010		BVTT+3-6
E	87-721-097-410		QT2+3-12 GLD
F	87-067-641-010		UTT2+3-8(W/O SLOT)BL

NOTE : exp = except

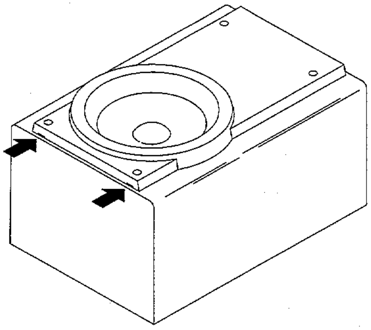
COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Sliver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

SPEAKER DISASSEMBLY INSTRUCTIONS

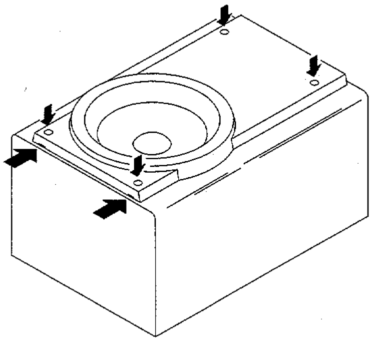
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



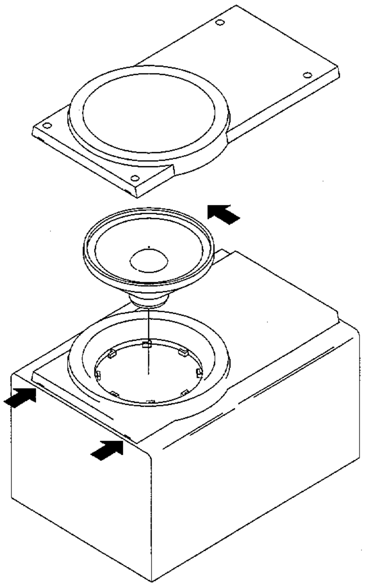
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

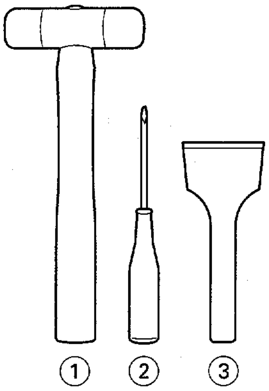


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction untill "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.
2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.
3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

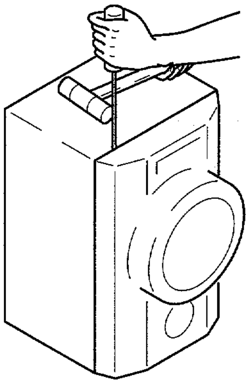


Fig-1

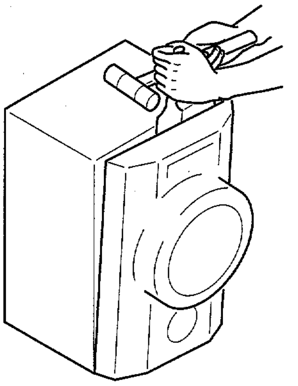


Fig-2

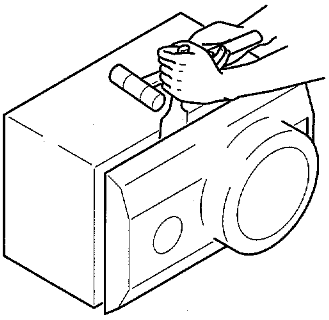


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER PARTS LIST (SX-NS112/SX-NS116 : YJSTC,YSTC/YBC2NC1,YBC)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NSL-001-010		PANEL,FR <NS112>
1	8Z-NSL-013-010		PANEL,FR B <NS116>
2	8Z-NSL-003-010		GRILLE,FRAME ASSY
3	87-NS7-611-010		CORD,SPKR
4	87-NSH-612-010		SPKR,CERAMIC ASSY
5	8Z-NSL-601-010		SPKR,W 120
6	8Z-NSL-025-010		PROTECTOR,SHEET

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NFA-901-010		IB,H(ECA)M<HR,HE>
1	8Z-NFA-905-010		IB,K(E)M<K>
1	8Z-NFA-906-110		IB,EZ(9L)M<111EZ,116EZ,16EZ,HS>
1	8Z-NFA-907-010		IB,V(ER)M<V>
1	8Z-NFA-915-010		IB,G(E)M<G>
1	8Z-NFA-916-010		IB,EZ(9L)M -112<112EZ>
1	8Z-NFA-935-010		IB,H(EC-K)S<HC>
2	87-043-106-010		ANT,FM 1007AWG<EZ,G,K,HS>
2	87-043-115-010		ANT,FEEDER FM<HR,HE,HC,V>
3	87-A90-030-010		ANT,LOOP AM-NC C<EZ,K,G,HS,V>
3	87-A90-054-010		ANT,LOOP AM-CON C<HR,HE,HC>
4	87-A90-119-010		ANT,WIRE SW(5M)<HR,HE,HC>
⚠ 5	87-A91-017-010		PLUG,CONVERSION JT-0476<HR,HE>
⚠ 5	87-A91-015-010		PLUG,CONVERSION JT-0475A<HC>
6	8Z-NF9-701-210		RC UNIT,ZAS02<EXCEPT HC,116EZ,16EZ>
6	8Z-NF9-702-010		RC UNIT,ZAS02<HC>
6	8Z-NF9-703-110		RC UNIT,ZAS17<116EZ,16EZ>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
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